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ABSTRACT

This comparison of values held by junior college freshmen and faculty is part of a larger study being conducted by the ERIC Clearinghouse for Junior Colleges to develop guidelines for institutional assessment and/or program development. Part I of this monograph discusses the generation gap as it applies particularly to values and goals of American college students. Included are: definitions of belief systems; approaches used to assess them, notably the Rokeach Terminal and Instrumental Value Scales; and pertinent research and rationale for incorporating a study of values into an analysis of the community college. Part II describes the basic rationale and results of this investigation. The student and faculty populations surveyed come from three Los Angeles area junior colleges, each respectively embodying the characteristics of an urban, suburban, and rural school. Most notably, it was found that: (1) the actual role of student or teacher seems to affect a value system more than the other variables of sex, designated major, and age; and (2) values do indicate one potentially fruitful way of examining people. It is hoped that by examining value differences, ways may be found to better understand people who function in our systems of education. (Author/CA)

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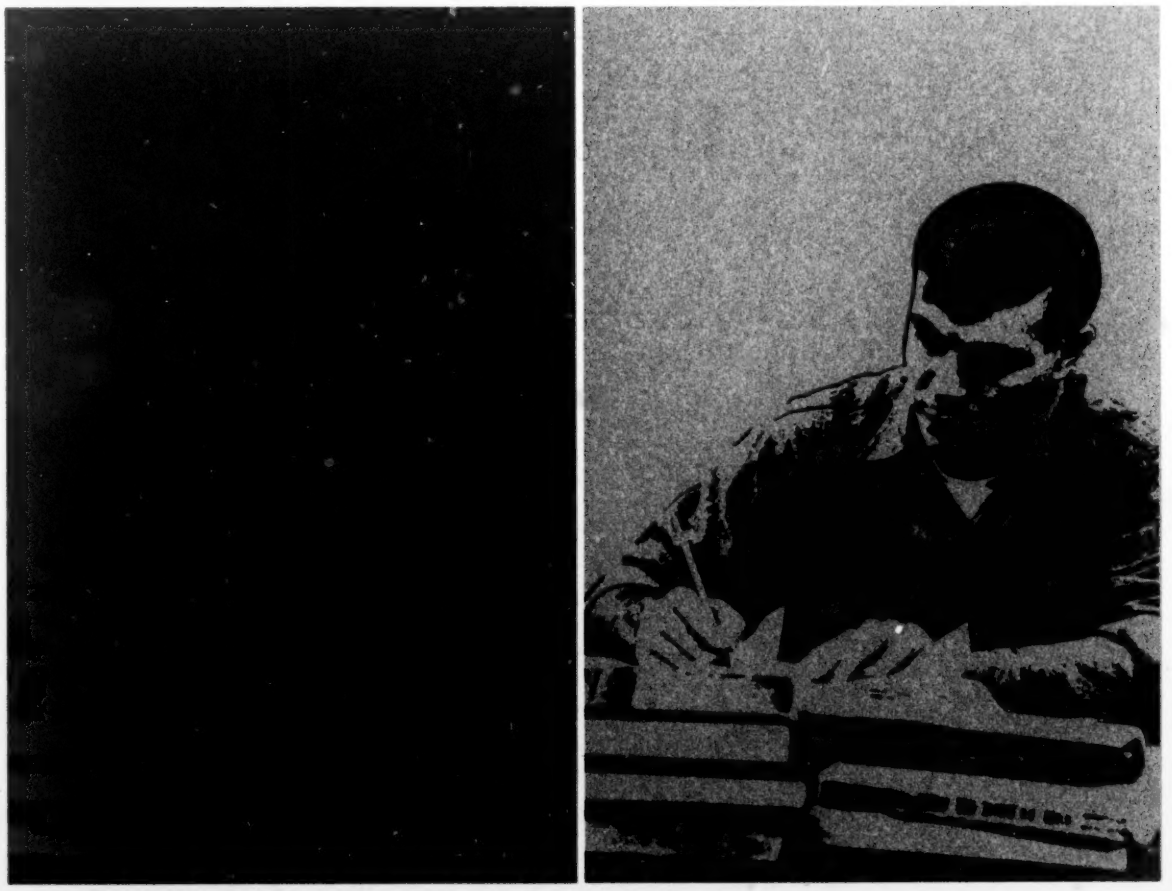

VALUES AND THE GENERATION GAP: JUNIOR COLLEGE FRESHMEN AND FACULTY

By Florence B. Brawer

UNIVERSITY OF CALIF.
LOS ANGELES

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Very special thanks are due to Milton Rokeach, not only for this monograph but also for the larger ERIC project, of which this is one part. Not only did Dr. Rokeach give us permission to incorporate in our survey his terminal and instrumental value lists, but his publications have served as an important guide. The many references to his work throughout this paper are only a small indication of the extent to which his thinking has influenced our own studies.

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April 1971

FOREWORD

Educational institutions in a democratic society have a dual mission: on the one hand, to transmit the hard-won knowledge acquired by one generation to succeeding generations, and, on the other, to transmit certain values from one generation to the next. These two functions are highly interrelated. It is to be hoped that the inculcation of certain kinds of values will facilitate the acquisition of knowledge and at the same time encourage each succeeding generation to modify, add, and extend the knowledge acquired from preceding generations. It is also to be hoped that an educational institution's concern with the transmission of values and knowledge is in the service of the student's personal growth, competence, and self-actualization.

Precisely which values *are* the specialized, distinctive concern of educational institutions? Precisely which values *should be* their specialized, distinctive concern? This monograph by Florence B. Brawer contains a rich body of data pertinent to such questions. She describes the values of relatively large numbers of teachers and students in three junior colleges in the Los Angeles area and identifies the specific values that differentiate between these teachers and students, thus enabling us to grasp in simple, quantitative terms the nature and size of the value gap that exists between them. I hope that her results will stimulate the reader to raise questions about the reasons for this value gap between teachers and students, about the degree of success or failure of the educational system implied by this value gap, and about the extent to which the values of the teachers tested are consistent with the ideals and objectives of the teaching institutions that trained them and with the broader educational institutions of which they are a part.

More specifically, I anticipate that Brawer's monograph will prove to be useful in at least two different ways. First, it should pave the way for others to carry out investigations concerning the values of teachers and students in other educational settings, and to extend such investigations to include comparative studies of the value patterns of school administrators, school boards, and parents. I also hope that it will lead to studies of value change: the effects of various kinds of teaching methods and innovations on value change, the effects of development and socialization, the effects of organizational school climates on value change. More generally, I hope that the monograph will lead us to raise questions about the extent to which (and the reasons that) the various public and private educational institutions of America actually facilitate or hinder change in the value systems of the millions of young people in their daily charge.

Second, I believe that the data reported will also prove useful for both pedagogic and research purposes. Teachers and students in social science and education courses can readily measure their own values and compare them directly with the teacher and student values reported here. Not only students but also teachers can benefit from such comparisons. I have found that self-confrontation in the classroom with information about one's own and significant others' values has demonstrable effects on changing values, attitudes, and behavior—effects that persist many weeks and months afterwards. Feedback of research findings such as those reported in this monograph therefore provides us with a more democratic and, at the same time, a more sophisticated approach to the value education of teachers and students than the hit-or-miss kinds of value education so typical in the past.

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INTRODUCTION

Man's continuing attempts to understand himself and his fellowman have led him into interesting avenues and byways. Some of these attempts are directed toward his interactions with his contemporaries, in both the larger society and its various subcultures. Some relate to his economic world—how he conceives, esteems, acquires, and disseminates his objective goods. Yet others have concentrated on his dealings with himself in his intrapersonal world. These side streets might be seen as disciplinary outlets, each directed toward achieving a common goal of understanding and each concerned with unique conceptual patterns and approaches.

The world today, however, cannot be perceived only in terms of discrete elements. No discipline exists apart from other disciplines. Just as no highway dominates a city to the exclusion of all other streets and avenues, no concept is so encompassing that it can function apart from other concepts, particularly when the target of inquiry is man's understanding of man. Independent and sometimes singular thrusts toward description and characterization of man's conceptual attempts to understand himself have been incorporated into more nearly global and holistic attempts to describe, to examine, to understand and, finally, to predict human functioning.

Some of these attempts have been concerned with belief systems—individual and collective beliefs, attitudes, and values. While there appears to be little consensus on definitions and exact interpretations of the concepts incorporated in belief systems, it is generally accepted that they provide a theoretically sound way of looking at man's individual and social characteristics. They also suggest potential, operationally feasible approaches to studying differences among population subgroups and, simultaneously, people of different generations.

Both theoretical structures and related examinations of belief systems provide a basis for presenting two phases of a project conducted by the ERIC Clearinghouse for Junior Colleges at UCLA and three California community colleges. One portion of the project is reported in this monograph. The second, a study conducted by Young Park, appears in a subsequent monograph (Number 12) in this series, entitled *Junior College Faculty: Their Values and Perceptions.*

This monograph discusses the study of values and belief systems and relates them to the "generation gap." It reviews some of the ways of considering beliefs, attitudes, and values, defining the concepts and pointing to salient distinctions that may enhance our understanding of their significance.

As the fastest growing area of higher education—one that presently enrolls more than two million students representing a cross-section of American youth—the junior college was chosen as a particularly valuable source for studying value congruence and value dissonance. These dimensions are fundamental to any understanding of human behavior and are particularly pertinent to issues concerning many people. Thus, by studying comparative value systems of community college freshmen, faculty, and staff members, we may shed light on what has been called the "generation gap." Understanding this gap and its many properties is important to junior college staff members, for it is they who must help to reconcile it.

Certain assumptions are basic to this study of values:

1. Values are important and fundamental dimensions of the individual.
2. Values may be revealed by a person's behavioral and articulated responses.
3. Values are amenable to measurement.
4. Interpretations of variant patterns of value ranking may reveal basic differences in outlook and orientation of individuals who represent population subgroups.
5. These examinations may also provide clues for structuring the environment of educational and other social organizations.

Part One of this monograph discusses the generation gap as it applies particularly to the values and goals of American college students. It includes definitions of belief systems, approaches used to assess them, pertinent research, and a rationale for incorporating a study of values into an analysis of community colleges.

Part Two describes the basic rationale and the results of an investigation of student and staff value systems in three proximate but diverse junior colleges. Inferences are drawn and suggestions made for ways in which the study of belief systems can open avenues for understanding educational organizations.

The following chapter presents a theoretical framework and isolates certain issues generally associated with the concept of the generation gap. This term connotes various degrees of hostility, insecurity, ambiguity, understanding, and acceptance/rejection—but it cannot and should not be ignored. Perhaps, by examining differences, we may find ways of better understanding people who function in our systems of higher education.

PART ONE

GAPS AND INTERACTIONS

chapter 1

The phenomenon known as the generation gap is not new, strange, or unique. Most people have encountered it either directly in their own families or indirectly through acquaintances and the mass media. The histories of many countries attest to traditional separations among age groups that have marked differences in attitudes, values, and behavior; while these may be no different today from what they were in past technical societies, mass media make them so obvious that few people can fail to be aware of them.

Even so, it was not until the Free Speech Movement gained momentum at Berkeley in 1964 that the issue achieved particular visibility. In addition to certain exclusively academic matters in the students' protests, other issues pointed up differences that might be attributable to age, role, or socioeconomic distinctions. Racial inequalities, military concerns, and the questioning of formal education's "relevance" to society, for example, are critical and current matters that often serve to markedly separate the generations—youths from adults or middle-aged adults from senior groups. It is likely that these differences are not singular but, rather, germane to other variables. Hence, it appears important to investigate diverse populations along basic, core dimensions that may consistently reveal generation differences—through both systematic research and the reports of behavioral scientists. Whatever the positions held and whatever the issues, enough indicators in our present society point to fairly fundamental issues of dissension to justify this examination. If it is important to understand the generation gap—and we believe it is—then understanding the exact nature of the differences that cause it is essential.

VARYING VALUES

In the past few years, such people as Friedenberg, Bettelheim, and Keniston have addressed themselves to generation differences. Friedenberg (28) views student activism as a reflection of the basic problem of students, on the one hand, refusing to accept the legitimacy of authority, and of officials, on the other hand, fearing a loss of their ascribed power.

Elaborating on Erikson's (23) "search for identity," Bettelheim (10) suggests that authority is almost invariably attacked in youth's process of seeking self.

Others consider value differences between the formal establishment and youth to be both a basic cause of the student activist movement and a fundamental indicator of the generation gap. Feuer (25), for example, interprets the "emotional rebellion" of students in the 1960s as being triggered by "disillusionment with and rejection of the values of the older generation." In his appraisal of committed youths, Keniston (39) analyzes student activists on the basis of their concern for the rights of others rather than of their disillusionment with personal matters. In each of these observations, it seems that behavioral differences between age groups might reflect certain more fundamental variances in attitudes and values.

THE GAPS EXTENDED

It has never been easy to be an adolescent. History, psychology, and fiction all point to the difficulties inherent in the years between childhood and adulthood. But today, accentuated by apparent breaks in communication caused by the speed and extent of social change, we have become increasingly aware of the gaps between generations.

Adolescents in all societies have obviously accommodated themselves to certain changes. In fact, the very definition of adolescence might well include "a posture of readiness for change." The generation that particularly concerns us today, however, seems asked to confront greater social issues than those of the recent past. As Keniston so perceptively points out, "One of the principal consequences of our high regard for change and of the institutionalization of innovation [in modern society] is that we have virtually assured not only that change will continue, but that its pace will accelerate" (39; 77:44).

THE "BEAT" GENERATION

In previous years and in other societies, man could be reasonably certain that the essential institutions and outlooks on life would prevail and that his children would be surrounded by the same measures of constancy he had known. Today it is unrealistic to expect maintenance of the status quo. Now, while we cannot predict in what ways, our only certainties are that the life situations of our descendants will differ considerably from our own and that the solutions to life's problems effective in previous years are neither applicable nor even remotely relevant to today. The fact that no one can know what contemporary decisions will remain valid for tomorrow's world suggests that the present assumes an autonomy unknown in more static societies. Perhaps of even greater psychological importance is the knowledge that rapport between generations weakens concomitantly as the rate of social innovation increases —an inverse relationship of which young people are acutely aware.

The solution may appear ambiguous, but the conditions certainly are not. Fairly clear-cut indicators point to changed perceptions and diverse value systems among members of different age groups, and for these incongruities several research studies offer empirical evidence. It has been found, for example, that, when responding to paragraphs describing particular life orientations or ways to live (45), older people seem to value "progress through action" and "enjoyment" less than younger respondents, while "social restraint" and "self-control" increase with age. When college students are compared with high school students, the two values that suggest the "preservation of the best man has attained" and the "stoic control of one's life" are given higher ratings by the older group. In terms of goal directions, Davis (21) has reported that, although both older and younger men maintain a high level of aspiration and responsiveness to socially determined failure, older men decrease their aspiration level after experiencing success. Conversely, after similar positive experiences, younger respondents increase their aspiration level. Older men appear to conform more closely to group norms while younger men tend to diverge when special standards are asserted.

The sociological aspects of aging are also apparent in the role alterations and disengagement from societal participation that accompany a modification of values—all of which may be called a process of disillusionment. Eichhorn and Ludwig (22) have pointed to experiences in aging that result in a rejection of youth-oriented, dominant-value configurations (toward science, technology, and optimism) in favor of a strict adherence to work-activity orientations. Unlike some cultures, American society seems to have no set of values for senior citizens that allow them to cope with the actual processes of aging—suffering, disability, death. Such paucity of standards, reflected in the disillusionment of the aged, is absent in the orientations of more youthful respondents.

Disparities in value systems, shown in youth's apparent lack of commitment to adult values and to the roles traditionally prevalent in society, have been expanded by behavioral scientists and demonstrated by researchers. An increasing number of youth—teenagers, juvenile delinquents, students—are alienated from their parents' conceptions of adulthood. Dissatisfied with traditional public life, they tend to disaffiliate themselves from many other comparatively traditional institutions of our changing society. While Keniston (39) has singled out this type of alienation as one of the cardinal tenets of the "beat" generation, it also characterizes a number of young people who—at least on the surface—do not appear typically "beat."

Even young adults, involved in their studies and ostensibly preparing for vocations and professions that are generally considered "establishment," frequently look at the world with a deep mistrust—a perception that Goodman (31) describes as "an apparently closed room with a rat race going on in the middle." Indeed, many young people conceptualize the adult world as a veritable rat race—as mechanical, over-specialized,

cold, and emotionally meaningless. As a consequence, many attempt to stay "cool," to remain uninvolved, nonattached, and invulnerable to the hurt that they see in so many adults. Commenting on this bleak picture, Keniston remonstrates that:

> . . . few young people are deliberately cynical or calculating; rather, many feel forced into detachment and premature cynicism because society seems to offer them little that is relevant, stable, and meaningful. They wish there were values, goals, or institutions to which they could be genuinely committed; they continue to search for them; and, given something like the Peace Corps, which promises challenge and a genuine expression of idealism, an extraordinary number of young people are prepared to drop everything to join. But when society as a whole appears to offer them few challenging or exciting opportunities, . . . "playing it cool" seems to many the only way to avoid a damaging commitment to false life styles or goals (39:47).

This becomes especially true when many members of older age groups exhibit actual hostility toward youth.

ETHICAL DIFFERENCES

If today's adolescents and young adults hesitate to accept adult behavior, attitudes, and goals, adults find it equally difficult to understand the young in terms of the values they traditionally hold for themselves. This is particularly evident when one considers that, until recently, ambition and effort were regarded as virtues, and the Protestant Ethic implied a dedication to hard work and to serious attempts at coping with economic problems.

In what has been called our "affluent society," production often outweighs need. In the past, the highest form of personal praise was associated with accomplishment, achievement, completion, and fulfillment—terms all keyed to economic effort. Today's emphasis is different: fulfillment more often means individual or personality completion or self-actualization. This change in emphasis demands consideration, especially when viewing young people who are not work-oriented, as were members of the older generation. The frequently expressed desire for leisure time and shortened work-weeks and the disregard for economic goods indicate a different stress on schooling and on vocational and nonvocational preparation. As one researcher indicates, we now see a reversal, a genuine inversion of values put upon functions. A new system of rewards may, with no need for nice discrimination, be detected as it exhibits itself rather blatantly even now in our daily lives.

What, then, is implied by the perceptual differences held by members of different generations? How do they relate to differences in belief systems? Do young adults hold different values from those of older or younger men and women? Are the values held by those functioning in special occupational roles different from those held by members of other

occupations and professions? What can the study of values tell us about the phenomenon so aptly called the generation gap? Do differences in behavior actually occur because of generation differences, seen in terms of age groups, or are these discrepancies due primarily to such other differences as sex, marital status, academic or occupational status, and academic or occupational milieu?

Theories and definitions pertinent to belief systems and related research are discussed in the remainder of Part One of this monograph. Part Two describes a study that attempts to answer these questions.

DEFINITIONS, DISTINCTIONS, AND EXAMINATIONS

chapter 2

With the current wave of student protest on campuses throughout the country, the term "generation gap" has gained prominence and popularity. Several systematic attempts have been made to analyze this phenomenon, some with a fair amount of success. Basic to any appraisal of the process itself, however, is the need to understand—from various points of view—the people who are protesting.

Studies of human behavior are manifold, ranging from the singular and simple to the multiple and involved. Because they are fundamental, relatively easy to measure, and tend to influence behavior directly, belief systems seem particularly salient dimensions for comparing groups who, by their diverse behavior, are conceivably manifesting different value orientations.

Neither the student protests nor the apparent generation differences, however, have instigated the many attempts to comprehend, study, and perpetuate values. Rather, all societies have had adult specialists who are concerned with the transmission and expression of culturally proven values to the younger generations, as well as with the maintenance of these values and mores among all their members. In most cultures, those cultural processes incorporating man's belief systems are highly volitional and involve rituals deeply steeped in emotional meanings. But as Barton suggests, in scientifically-oriented modern cultures, they have become the object of considerable research by:

> . . . the social scientists, and the specialists in education and moral indoctrination—educators, churchmen, psychiatrists, social workers, correctional workers, and, occasionally, the mass-media communicators. The professional value-transmitters want the answers to practical problems, and sponsor and use applied research. The professional social scientists are called in to provide this applied research . . . [and] to develop general theories and methods for understanding and predicting the behavior of individuals, groups, and social systems (8: S-62).

Almost everyone seems to have a fairly clear idea of what the concepts of attitudes and values "really" mean. Thus, unlike other terms commonly used to describe human functioning and/or to account for individual idiosyncrasies, little explanation is needed to justify their use, either as personality descriptors or as "proper" subjects for investigation. The many studies of values and attitudes in education, sociology, anthropology, and psychology all attest to the ease with which these terms are employed and understood.

If it is important to understand man and his interactions with others—and we maintain that it is—then one approach to understanding is through the belief systems that people hold. If, in turn, these belief systems are to be understood, it appears important to establish an agreement on their meaning and an awareness of how others have viewed and measured them. This chapter discusses certain theoretical bases for the systematic study of man's beliefs, indicates important distinctions, and cites techniques that are employed for measuring both attitudes and values. Further, it attempts to arrive at precise definitions of these same concepts—concepts that appear relevant to an extended view of the generation gap, in that they deal with the basic dimensions that implement the understanding of human similarities and differences.

A TIME PERSPECTIVE

Throughout the years, fiction writers and philosophers have concerned themselves with belief systems. In spite of the popularity of both values and attitudes as a source for human speculation and in spite of the frequency with which these concepts have been applied, however, the precise study of man's belief systems is fairly recent. Its development has sprung from two overlapping approaches to human appraisal: (1) individual, psycho-philosophical or, more exactly, the personological; and (2) the socio-political, or the study of groups.

When academic psychologists, i.e., experimentalists, were engrossed with such concrete questions as the rates and paths of nerve impulses and the presence or absence of imageless thought, personality theorists were concerned with psychological symptomology and with the specific determinants *underlying* human behavior. When many psychologists were ignoring or minimizing the study of motivation, personality theorists saw these same dynamics as important keys to human understanding.

Freud and McDougall were the first investigators to consider motivational processes seriously and systematically. Their emphasis on the dynamic forces that determine human behavior and on the variation in strengths and weaknesses manifested by different individuals stimulated a line of study concerned with the person's relationships to himself and to others. Subsequently, during the 1920s and 1930s, several people became engaged in the orderly study of attitudes. Murphy and Likert (47), for example, presented a combination of autobiographical and quantitative data that provided information about personality determi-

nants of behavior and assessed people from two distinct approaches—clinical and socio-psychological.

Other psychologists and behavioral scientists also elected to study attitudes as basic dimensions of individual functioning. Much of this work stemmed from Spranger's original *Lebensformen* (71), which postulated the existence of six fundamental types of subjective evaluation: theoretic, economic, esthetic, social, political, and religious. These six ways of looking at life were described in terms of distinct and separate ideal types and, while Spranger's theory implied in no way that any given person belongs exclusively to one type, it did provide a definite schema within which to classify individual behavior. It also prompted Allport in 1936 (3) to write that the concept of man's belief systems was indispensable to the psychology of personality. Even today, few people would argue the point.

Until the mid-twentieth century, however (and despite this growing interest in man's functioning), although few psychologists totally ignored the concept, few were as concerned with the deliberate examination of values as Allport. Jung, for example, had earlier considered values to be measures of intensity that represented the amount of psychic energy invested in elements of the personality. He proposed that, when a person places a high value on a particular feeling or idea, a considerable force is directed by that idea or feeling to instigate behavior: for example, if "truth" is valued, a great deal of energy is expended in the search for it. Jung's method (38) of classifying the attitudes of introversion/extroversion and the four functions of thinking, feeling, sensing, and intuition hold certain parallels with other typologies of values.

Murray considered values as adjuncts to his need/press rationale rather than as separate dimensions for investigation. Because needs always operate in the service of some value or with the intent of inducing some end-state, he argued that values should be considered in any analysis of motives.

> Since observation and experience testify to the fact that . . . every . . . kind of action has an effect . . . which can be best defined in terms of some valued entities . . . , the naming of the valued entity in conjunction with the named activity should contribute a good deal to our understanding of dynamics of behavior (49:288).

Just as Murray tied values to his need/press rationale, Rogers (57) related them to his view of the structure of self and to the perceptive and conceptual patterns that result in the formulation of the "I" or the "me." He suggested that values accrue to the self-picture through direct environmental experiences as well as through adaptations from others. Experiences—both positive and negative—determine the selection and perpetuation of values, often as a result of conflicts between two or more values.

Sociologists and political scientists, conceptualizing attitudes and values as psychological representations of the influences of society and

culture, also considered them to be fundamental variables by which to examine human behavior. This interest was consistent with the emphasis of Thomas and Znaniecki who, as long ago as 1918, proposed that the central task of social psychology was the study of social attitudes. In their now classic studies of the Polish peasant in America, they became the first to describe this concept systematically and operationally. Since this pioneering effort, behavioral scientists have joined forces with numerous others who attest to the importance of social attitudes in the assessment of human functioning.

Questions relating to goals and values, however, are too inclusive to be limited by disciplinary boundaries. They cover the gamut of human activity—social, economic, psychological, educational, cross-cultural—and they concern people who are interested in many facets of human functioning. One comment on the Department of Health, Education, and Welfare's exploration of the development of social indicators was that, when pushed to its logical limits, the management of society can be rational only with total consensus on national goals and with relatively complete knowledge about how to achieve the goals. Just as emphatically, we would like to argue that consensus on national goals is currently possible on only the most general levels (e.g., we want the United States to remain an "independent nation"). Consensus on more specific goals depends on individual value systems and is, therefore, considerably more limited and difficult to attain. Before any type of accord is reached, definitions must be established and certain distinctions described.

DISTINCTIONS

While there may be a general consensus on the importance of studying belief systems, there is little uniformity in the definitions of concepts associated with this construct. This lack of clear-cut definition relates to other problems. What exactly is an attitude? A goal? A value? How do they differ? Where do they overlap? Definitions may be broad or narrow, rooted in a single discipline or synthesized from several areas of study; but whatever the choice, they must be explicit, operationally definable, and readily applicable.

Because values and attitudes have been neither uniformly nor explicitly defined and because several different terminologies have been commonly used in their description, it is difficult to compare studies employing these concepts. The difficulty is further compounded by the recognition that what is often considered an attitude or value appears to be more exactly a personality trait or a special mode of individual functioning. In fact, many studies purporting to measure values are really investigating traits not immediately related to belief systems—for example, relationships between values and the characteristics that are measured by such instruments as the *F* and *E Scales* (2). In our own view, however, even though they are all basic and important characteristics of the person, these traits are better seen as separate from the components of belief systems.

In an attempt to clarify some of the confusion in conceptualization, Barton (8) puts "values" into specific categories. His five distinctions appear important to our understanding of values:

1. Values may be seen as attributes of people or attributes of objects. In reference to objects sought by various individuals, values are perceived as within the object and thus extrinsic to the person seeking them. Investigation of such values involves the study of standards to which individuals aspire.

2. If we study the ways value-shaping institutions (schools, churches, correctional and psychiatric institutions) influence people, the values of individuals and groups become particularly important referents.

3. Values are often seen as either verbalized and conscious standards of individuals or as inferential constructs made by the researcher on the basis of observable behavior. In this sense, Kluckhohn defines the term "value" as: "a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means and ends of action" (40:395). Such a perception raises problems of whether the values in question are held in abstract by the person being studied or by the researcher conducting the investigation. Accordingly, the person's implicit values may be inferred through his behavior and/or his verbalization, but they may be interpreted by *either* the subject *or* the investigator.

4. Values seen as desires or as obligations are frequently identified with preferences, interests, and/or motives, a broad definition that ignores certain distinctions between the actual feeling of *liking* and the feeling of *obligation*—the difference between "I want to" and "I ought to." Posing such a distinction, Barton again calls on Kluckhohn for further clarification:

> A value is not just a preference but is a preference which is felt and/or considered to be justified "morally" or by reasoning or by aesthetic judgments, usually by two or all three of these. Even if a value remains implicit, behavior with reference to this *conception* indicates an undertone of the desirable—not just the desired. The desirable is what is felt or thought proper to want (40:396).

Accordingly, values may be conceived as standards or as preferences —the sense of obligation distinguished from the sense of preference, the "ought" from the "want." Certain ambiguities in the feelings of requiredness or obligation and feelings of preference apparent in these distinctions are stressed by Barton who sees different sources—people and culture—giving rise to a sense ". . . of right and wrong, good and bad, obligatory and forbidden, worthy and unworthy" (40:566).

Values actually reflect many different situations and experiences. In some people, Barton goes on to say, they:

> . . . may reflect an introjected punitive parent . . . [and/or] internalized group sentiments, emphasizing shame rather than guilt. Some may derive from individual empathy with the feelings of other individuals,

a sense of identification with others generally. The feelings of obligation and respect which define normative standards may thus be subjectively rather different for different people. It may be possible to distinguish the verbal and non-verbal behavior by pursuing these differences in origin and feeling-tone, even when the standard is abstractly the same . . . (9: 66).

Thus he differentiates between two types of values: those that may be applied to the motivational or normative (obligatory, ought, or moral values) and those applicable to feelings or preferences (likings, needs, desires, interests).

People's lives are shaped by major, enduring preferences among choices equally acceptable—for activity rather than passivity, for dealing with things or abstractions, for enjoying nature rather than artificial surroundings, and so on. At the same time, the sense of obligation also shapes people's lives and permits society to exist (8: S-66).

5. Further distinctions are apparent between values that represent a relatively small number of basic principles or tendencies and attitudes that are used in a more specific sense and refer to specific items. Attitudes—about campus unrest, long hair, or short skirts—need not be long-enduring, but can change daily in response to experiences and new stimuli. To consider these transitory attitudes in relation to basic value systems, a factor analytical approach might be used whereby specific choices that tend to appear together are reduced to common, core concepts. Those items that empirically form a positively correlated cluster of attitudes would subsequently result in more general, yet basic, factors. In such instances a general value for, say, the esthetic, includes certain specific attitudes about sculpture, graphics, the theatre, and moving in artistic social circles.

The five distinctions made by Barton are encompassed in a working definition for a typology in which:

> . . . values [are] defined . . . as general and stable dispositions of individuals, verbalized by them or inferred by the researcher, involving preference or a sense of obligation. The either-or components of this definition give us a typology of value concepts (8: S-69).

ATTENDANT DIFFICULTIES

The failure to consider differences between variables is a common pitfall in most studies of human values. The failure is even greater when there is no understanding of the relative importance existing between the different values themselves. Accordingly, Smith points to the importance of isolating the dominant value:

> . . . since there are different values and some scale of importance must exist among them, we shall have to look for . . . the dominant value, introducing a measure of order and coherence into the whole. Though all values are, by their very nature, of importance to the self, some are more important than others and the most important will at the same time be most revelatory of the nature of the person (69:358).

The tendency to place all values on one level, to lump them together under a common heading, and to examine them *en masse,* obscures the fact that behind every situation involving values stands an individual who is making the critical response. We can better understand the person "if we are able to determine the type of life he has chosen and the values which he holds" (69:358).

It frequently happens that different individuals in diffent situations may acknowledge a common value. This does not necessarily imply that the particular value occupies the same position for all. One person, for example, may acknowledge tolerance because of its ethical implications, while another may value the same quality in order to further some purely selfish end. Unless knowledge is available about both the dominant and auxiliary values, understanding is decidedly limited. This applies especially to the consideration of value differences among different people—cultural groups, generations, occupational status, and general life orientations. It also suggests that individually determined values might be perceived in terms of hierarchical systems, a point that bears directly on the rationale and assessment schemes developed by Rokeach (58; 59; 61) and described in Chapter 3.

ASSESSMENT SCHEMES

Despite the lack of consistent definition and certain difficulties associated with belief systems, several attempts have been made to measure attitudes and values. The remainder of this chapter discusses some of the instruments commonly used to assess values and points to certain issues that must be recognized in their conceptualization and measurement.

No discussion of the measurement of belief systems can fail to include the work of Allport and his colleagues, who developed the first systematic technique to evaluate values. Allport and Vernon's *Study of Values,* first published in 1931, was later revised as the Allport-Vernon-Lindzey Scale (6; 4). This instrument is built on the typology of traits earlier postulated by Spranger (71). It has been used extensively with large populations, especially college students, and measures the relative importance (rather than the *absolute* importance) to the individual of six values that are summarized in terms of Spranger's "types of men":

1. *Theoretical.* The theoretical man holds as his dominant value the discovery of truth. His chief aim in life is to order and systematize his knowledge; criticalness, empiricism, and rationality are of paramount importance to him.
2. *Economic.* The special characteristic of the economic man is his value of what is practical and useful, particularly the affairs of business. His standards of preference are primarily those associated with recognizable utility.
3. *Aesthetic.* This man sees form, harmony, and beauty as his highest values. Experiences are judged from the standpoint of grace, symmetry, or fitness, and artistic episodes are of chief interest and most importance to him.

4. *Social.* The social man's highest value is seen in terms of other human beings and their love, altruism, or philanthropic aspects. He tends to be kind, sympathetic, and unselfish, viewing others as ends rather than as means.

5. *Political.* Power and influence are the marks of the political man. His particular interests involve struggle, competition, and leadership.

6. *Religious.* Unity is considered to be the highest value of the religious man. He tends to be mystical and to perceive the universe as a total entity to which he is related.

In reviewing the development of the six scales in *The Study of Values,* Allport reports that

> It did not take long to discover that, when confronted with a forced-choice technique, people do in fact subscribe to all six values, but in widely varying degrees. Within any pair of values, or any quartet of values, their forced choices indicate a reliable pattern. Viewed then as empirical continua, rather than as types, the six value directions proved to be measurable, reproducible, and consistent. But are they valid? Can we obtain external validation for this particular a priori conception of traits? The test's manual contains much such evidence (6).

In spite of the limited number of measured values, this instrument continues to be a popular tool for counseling and research.

Sometimes techniques that measure one type of variable actually elicit other dimensions. A case in point is the series of studies conducted by Adorno, Frenkel-Brunswik, Levinson, and Sanford on *The Authoritarian Personality* (2). These investigators found that individuals who are decidedly ethnocentric in their belief systems and who hold particular kinds of values and attitudes concomitantly tend to be extremely authoritarian in their behavior and to have the decided biases that are typically associated, for example, with Fascistic tendencies. This finding suggested that special belief systems correlated strongly with other definitive characteristics. Indeed, the line of separation between a value or an attitude and a specialized kind of behavior may be tenuous at best. The scales developed in the course of work on ethnocentrism isolate dimensions closely allied to belief orientations.

Based on a different theoretical structure, the *Myers-Briggs Type Indicator* (50) assesses respondents in terms of their orientations toward the attitudes of introversion/extroversion and the four functions of thinking, feeling, sensation, and intuition that were first postulated by Jung (38). While these dimensions do not deal with individual belief systems as commonly defined, they do suggest value orientations in terms of the investment of psychic energies. They imply a reciprocal arrangement wherein energy is invested in things we value and we value the things in which we are involved.

Another technique for measuring beliefs was devised by the *Cooperative Study in General Education* (20). This scale presents a long series

of paired comparisons of general goals that are seen as representing personal preferences, as well as goals commonly considered morally binding on people. It, too, has been used with various groups of college students.

Morris's Ways-to-Live questionnaire (45) contains paragraphs describing 13 ways of life. These include general personal preferences, preferences for social policies, norms of conduct, specific activities or experiences, and philosophical statements regarding the nature of the world. Subjects are instructed to respond in each of two ways: (1) by rating each "way" on the basis of a seven-point scale, showing an absolute degree of liking or disliking, and (2) by ranking the 13 patterns in terms of preference. In this second rating, the scale is similar to Rokeach's (58) value lists, discussed in Chapter 3. The merits of the Morris system have been described by Barton (9).

Among other techniques designed to assess individual belief systems are the *Minnesota Teacher Attitude Inventory* (19), Gordon's *Survey of Interpersonal Values* (32), Williams' *Analysis of Personal Values* (76), and Terman's *Attitude-Interest Analysis Test* (73). Buros' *Mental Measurement Yearbooks* (15; 16) contain descriptions of these and other instruments, together with information about their standardization, validity, reliability, and purposes. Devices to measure values, developed by such investigators as Kluckhohn and Strodtbeck (41), Goldsen *et al.* (30), and Stouffer and Toby (72) are also analyzed by Barton.

CAVEATS AND ISSUES

Any definition depends on interpretation by the observer as well as by the person initiating the description. Interpretations also depend on the individual's frame of reference—a condition that goes well beyond any one issue at any one point in time. Thus, to understand how a construct is employed, it is important to adopt a phenomenological approach and to attempt to uncover the thinking and feeling of the subject—a stance that may often be difficult or infeasible. When either handicap proves too great, knowledge of a special object—in our particular case, values—may be facilitated by understanding the person's general operational framework or life style.

The lack of consensus in defining belief systems has been a major difficulty in their appraisal. In addition to the several descriptions of values and attitudes mentioned above, there are still others. Since an all-inclusive discussion of the concepts—in terms of both theory and assessment—is beyond the scope of this paper, we can only hope that people interested in looking at individuals in groups will recognize the difficulties attendant in understanding belief systems. Some of these have been either explicated or implied by Barton. Others include, for example, ways to measure belief systems, the relationships of attitudes to values, and questions of whether or not what are generally seen as values or attitudes are really personal traits.

Further, an instrument is only as good as it is appropriate. Before one attempts to appraise the attitudes and/or values of another, he must be aware of the theoretical constructs and development of the technique he selects and be familiar with its conceptual descriptions. He must also know how the information derived from responses to the instrument will be used. For anyone seriously interested in describing and measuring belief systems, the Barton report is essential. Other sources of information are Feldman and Newcomb's *The Impact of College on Students* (24) and the many journals that deal with public opinion.

If the person concerned with belief systems is aware of the various ways the involved concepts are defined and the difficulties inherent in their measurement, he is then in a position to use them as inputs to human understanding. Chapter 3 discusses Rokeach's approach to conceptualizing and measuring values. It appears relevant to issues related to the generation gap and has been incorporated in a study of junior college faculty and freshman students conducted by the ERIC Clearinghouse for Junior Colleges.

ROKEACH'S VALUE SCALES

chapter 3

Significant to both the general discussion of belief systems and the study of values among junior college personnel described in Part Two of this monograph are the rationale and the assessment scheme developed by Milton Rokeach at Michigan State University. Several of Rokeach's recent publications (58; 59) include reports of an operationally feasible scheme for ordering two types of value systems as well as research activities using these scales. Together, his theoretical framework and his approach to measuring values offer a new and useful way to look at the value structures of the person himself, of the person interacting with a few significant others, and of large populations.

According to Rokeach's phenomenological approach, every person who has undergone some process of socialization has acquired certain beliefs that he considers socially and personally desirable about modes of behavior or about end-states of existence. Every person differs from every other person, not so much in whether or not he possesses certain values but rather in the degree to which these beliefs are important to him. The differences become evident when these values are arranged into a system or organization, a unique hierarchy of values.

> From a phenomenological standpoint, everything that a person does and all that he believes is capable of being justified, defended, explained, and rationalized in value terms, that is, justified in terms of modes of behavior and end-states of existence that are personally and socially worth striving for. Hence, a phenomenological approach commits us to elicit from a person the conceptions he has of his own values [and] . . . admit[s] possessing . . . (59:3).

The ERIC Clearinghouse for Junior Colleges at UCLA is concerned with the examination of various aspects of junior college education. Knowing the belief structures of those individuals operating within that organization seems basic to any deep understanding of both the institution and its people. Rokeach's value scales, easily applied and theoretically sound, form an integral part of a larger ERIC/UCLA project conducted for the purpose of developing models to be used in an evaluative study.

BELIEFS AND ATTITUDES

Clear definitions are, of course, prerequisite to understanding any concept. It has been suggested that, in the case of values and attitudes, clarity is especially important: although these terms are often used interchangeably, they are sufficiently different to make the exchange inaccurate and confusing.

The essential characteristics of beliefs, values, and attitudes are further explained by Rokeach. He views *beliefs* as predispositions that have cognitive, affective, and behavioral components and that, when activated, result in preferential responses. These responses may be toward objects or situations; toward others who take a position *vis-à-vis* the attitude, object, or situation; or toward the maintenance or preservation of attitudes.

Rokeach conceives of *attitudes* as relatively enduring organizations of interrelated beliefs. Attitudes that describe, evaluate, and advocate action toward an object or in a situation and that may or may not be in conflict comprise these constellations. Hence, attitude *objects* must always be seen in some kind of relationship with *actions* or *situations.*

Rokeach elaborates on attitudes clustering around:

> . . . a specific object (physical or social, concrete or abstract) or situation, predisposing one to respond in some preferential manner. Some of these beliefs about an object or situation concern matters of fact and others concern matters of evaluation. An attitude is thus a package of beliefs consisting of interconnected assertions to the effect that certain things about a specific object or situation are true or false and other things about it are desirable or undesirable (63:16).

VALUES AND VALUE SYSTEMS

In the years since Thomas and Znaniecki (1918) first proposed that the study of social attitudes should be the central task of social psychology, much attention has been paid to theories about and examinations of attitudes. This greater emphasis on attitudes has not evolved "out of any deep conviction that man's attitudes are more important determinants of social behavior than man's values," but rather, "out of the more rapid development of methods for measuring attitudes combined, perhaps, with a certain vagueness of understanding about the conceptual differences between values and attitudes . . ." (59:1). In spite of the difficulties in defining and measuring values, however, they play a more dynamic role than attitudes within an individual's cognitive and affective structure. It is therefore important that they be distinctly emphasized in studies of the individual and his interactions with significant others.

Thus, while recognizing the importance of attitudes in determining specific behaviors, Rokeach affirms the basic and more dynamic nature of *values.* He concurs with Allport and others that, while attitudes always focus on specific objects and/or specific situations, values are general and are concerned with modes of conduct and with end-states of existence. Drawing on the work of Kluckhohn (40), Smith (69), and Williams

(76), Rokeach extends the definition of values by explaining that, if a person is seen as "having a value," it really means that he consistently believes in and prefers certain specific behaviors and particular goals or end-states. Once he internalizes certain values, consciously or unconsciously, they become criteria for

> . . . guiding action, for developing and maintaining attitudes toward relevant objects and situations, for justifying one's own and others' actions and attitudes, for morally judging self and others, and for comparing oneself with others. Finally, a value is a standard employed to influence the values, attitudes and actions of at least some others . . . (63:16).

Values, then, are beliefs that guide actions and judgments across specific objects or situations and beyond immediate goals, that lead to more nearly ultimate states of existence. Unlike attitudes, they are imperative. They are not only beliefs about the preferable, but are yardsticks to guide actions, comparisons, evaluations, and justifications.

Any single value is part of a larger organization that Rokeach calls a *value system*. The value's importance to the individual is shown by its position in *relation* to other values, the dominance of certain values over less important ones. Value systems are hierarchical orderings of the individual's beliefs, ranked according to their importance to him.

TERMINAL AND INSTRUMENTAL VALUES

The structure postulated by Rokeach prompts a clear-cut distinction between two types of values: terminal and instrumental. *Terminal values* refer to end-states of existence toward which people strive, while *instrumental values* suggest the modes of behavior they prefer. Certain assumptions are basic to understanding both terminal and instrumental values as conceived and developed by Rokeach and his associates:

1. It is assumed that "men do not differ from one another so much in whether or not they possess certain values, but rather in how they pattern them and rank them in order of importance" (65).
2. It is further assumed that

> . . . variations in value systems are, broadly speaking, a function of antecedent cultural and social experience, on the one hand, and personality factors on the other. [Thus, it can also be assumed that differences in values are] . . . associated with differences in subcultural membership, sex, religion, age, race, ethnic identification, life-style, socioeconomic status, child-rearing practices, intelligence, authoritarianism, and the like (65:98).

3. Finally, it is assumed that the views held by a person or a group have social consequences.

Beyond these premises, certain distinctions apply to each of the interrelated systems: terminal values represent specific beliefs that one strives to maintain as personally and socially worthwhile (for example, a world at peace, wisdom, mature love) and sees as general goals, as

end-states of existence. On the other hand, instrumental values determine the way the person conducts himself to achieve these goals. And, whether he is conscious of them or not, they constitute the criteria for his behavior. Instrumental values are closely related to what other psychologists often call traits or modes of behavior; they refer to dimensions of honesty, intellectual orientation, and logical modes of conduct or behavior, such as courage and cheerfulness. The hierarchical orders by which both terminal and instrumental values are conceptualized suggest a rank ordering along a continuum of importance or dominance. Still, whatever the ordering, all values fall into one category or the other —terminal or instrumental.

When certain values are in conflict, the individual's idiosyncratic structure determines the value he applies to a particular situation: different priority lists regulate different situations. For example, when there is a conflict between the terminal values of self-fulfillment and prestige or between two or more instrumental values, the person's own belief system will reconcile the conflict by establishing primacy or dominance.

THE ROKEACH SCALES

From this rationale, Rokeach has developed a way to measure values by means of two independent scales. One list includes 18 terminal values; the other, 18 instrumental values. The terms are arranged alphabetically and the subject is asked to rank them "in order of importance" to himself.

The list of 18 terminal values is distilled from a list of several hundred, gathered from various sources: a review of the literature, Rokeach's own terminal values, those suggested by graduate students, or those obtained by interviewing a sample of adults. Some values, considered more or less synonymous with others, were eliminated (e.g., *Brotherhood of Man* and *Equality; Peace of Mind* and *Inner Harmony*). Others were eliminated because they did not represent end-states of existence (education, for example, is a means to an end, whereas wisdom is considered an end-state).

The 18 instrumental values were selected by a somewhat different procedure. From an early compilation of about 18,000 trait names, originally compiled by Allport and Odbert (3), another list was compiled of 555 words that designated personality traits and for which positive and negative value ratings were made (7). The 555 traits were then reduced to about 200 positively evaluated trait names and, from this smaller list, the 18 instrumental values were finally selected.

Because all 36 of the values are socially desirable, the task of ranking seems difficult and most respondents feel that the ordering process is not very reliable. Evidence, however, points to the contrary. The rank ordering that the individual imposes on the two sets of value lists comes primarily from within himself and is not inherent in the structure of

the stimulus material itself. In this sense, the two value lists are similar to other projective techniques that have more or less ambiguous stimuli to which the subject responds. A major difference is that the Rokeach values are more structured than the ink blots of the Rorschach technique (66), the black and white prints of the Thematic Apperception Test (49), or the puppies of the Blacky Test (12).

Rokeach's value lists have been employed in a number of studies. Among them was a large-scale administration to 1,400 Americans over 21 years of age by the National Opinion Research Center in 1968. Various publications describe the results of investigations with these measures, their reliability and validity, and their meanings in terms of various reference groups. Both the terminal and instrumental scales are presented below, as they appear in Form E.

Instrumental Values	Terminal Values
Ambitious (hard-working, aspiring)	A Comfortable Life (a prosperous life)
Broadminded (open-minded)	Equality (brotherhood, equal opportunity for all)
Capable (competent, effective)	An Exciting Life (a stimulating, active life)
Cheerful (lighthearted, joyful)	Family Security (taking care of loved ones)
Clean (neat, tidy)	Freedom (independence, free choice)
Courageous (standing up for your beliefs)	Happiness (contentedness)
Forgiving (willing to pardon others)	Inner Harmony (freedom from inner conflict)
Helpful (working for the welfare of others)	Mature Love (sexual and spiritual intimacy)
Honest (sincere, truthful)	National Security (protection from attack)
Imaginative (daring, creative)	Pleasure (an enjoyable, leisurely life)
Independent (self-reliant, self-sufficient)	Salvation (being saved, eternal life)
Intellectual (intelligent, reflective)	Self-Respect (self-esteem)
Logical (consistent, rational)	A Sense of Accomplishment (lasting contribution)
Loving (affectionate, tender)	Social Recognition (respect, admiration)

Obedient
(dutiful, respectful)

Polite
(courteous, well-mannered)

Responsible
(dependable, reliable)

Self-Controlled
(restrained, self-disciplined)

True Friendship
(close companionship)

Wisdom
(a mature understanding of life)

A World at Peace
(free of war and conflict)

A World of Beauty
(beauty of nature and the arts)

IN SUM

This, then, is the basis for the development of the two value lists that form an important part of the project reported in Part Two of this monograph. The difficulty in definition and the lack of consensus about the meaning of the terms *values* and *attitudes* have resulted in limited information of a systematic nature that would provide quantitative knowledge about values in American society. Another reason for the limited number of data available in this area is that economical and/or simple methods for measuring values have not been generally available. The method advanced by Kluckhohn and Strodtbeck (41) is time-consuming and requires interviews with individual respondents. Morris's measurement of values (45) is rather complex and requires a high level of education on the part of the respondent. And, although the Allport-Vernon-Lindzey (4) scale is a widely used instrument that has provided a popular approach to measuring values, it is fairly lengthy and measures only six values based on the Spranger types.

Rokeach's approach to the measurement of values appears to overcome many of the problems encountered by other instruments and is feasible because of ease of both employment and interpretation. In addition, a growing body of research has been reported employing this instrument. Thus groups responding to these scales may be compared with a selected but representative national sample.

Part Two of this monograph presents the findings of one aspect of a study that uses Rokeach's terminal and instrumental scales. It discusses values in terms of interactions between faculty and students in three junior colleges and the function that these beliefs play in determining generation differences. In the next monograph, Number 12 in this series, *Junior College Faculty: Their Values and Perceptions,* Young Park compares value systems of the faculty in these same junior colleges and describes the institutional personality of each college in terms of the perceptions held by its instructors.

VALUES IN INTERACTION

chapter 4

The systematic study of attitudes and values previously rooted in the disciplines of individual and social psychology merged when education began to look at itself in terms of student impact. Considering the part formal education attempts to play in the perpetuation of values, such a merger is hardly surprising since a major function of the school has always been the transmission of values from generation to generation. This is consistent with Rogers, who points out that the work of the teacher and educator, like that of the therapist, is inextricably involved in the problems of values (57:239).

Perpetuated through the years more or less successfully, the school's function of transmitting values has met with varying degrees of acceptance on the part of its students. Some accept the mores and values of their teachers without question. Others reject almost totally everything an adult attempts to "teach." Similar degrees of disparity in acceptance/rejection have probably occurred in other, more primitive, societies as well as in technological societies, but today, with so much emphasis on the phenomenon known as the generation gap, the study of values becomes particularly important.

All schools accept the mandate that they teach values. By extension, since the junior college—a self-styled "teaching institution"—must concern itself with the transmission of values, consideration of the differences, similarities, and changes of this concept appears especially appropriate to any study of the junior college. Since little work has been done on the issue at this level, however, it becomes necessary to look to higher education as a whole for available information regarding value compatibility among students and faculties, among different age groups, and among various student subcultures.

STUDENT VALUES

As long ago as 1955, Gillespie and Allport (29) compared the attitudes and values of American students with those of foreign students. The characteristics that most sharply distinguished American students from

the college populations in other countries were the accent on privatism, inclination to seek a rich and full life for oneself and one's family, lack of concern about social problems, and emphasis on thinking about material benefits in practical and concrete terms. The values held by American students differed greatly from those of students in Mexico, in Egypt, and in Bantu societies, where the predominant hopes were to contribute something to the community, to raise the standard of living in the villages, to help eliminate poverty and disease, and to aid their countries' struggles for independence. Similar contrasts were shown by Arabian students, whose hopes and aspirations were so clouded with emotion and whose values were so exaggerated that Sanford (67) felt it was a relief to return to the banal, practical, rather unimaginative, and badly informed views of American college students.

THE JACOB REPORT

It was not until Jacob (37) issued his report in 1957, however, that the investigation of values among college students was either seriously or systematically considered. Defining values as the standards for decision-making that are held by individuals and normally identified when articulated in verbal statement or overt conduct, Jacob investigated values held by American college students in terms of their background in the social sciences. In his research, he examined both the actual behavioral choices of students and the structure of beliefs to which they appeared related.

Data were acquired from several sources: student responses to contemporary value patterns, overt changes resulting from the college experience, and the extent of influence of various curriculums on their values. Other material provided information about college impacts that were potentially attributable to instructors and particular teaching methods, as well as information about the development of particular values by certain institutions.

Interpreting this material, Jacob saw American college students of the 1950s as "'gloriously contented' with their activities and outlooks . . . 'unabashedly self-centered,' with strong aspirations toward material gratifications for themselves and their families" (37). The profiles drawn from these data, representing 75 to 80 per cent of the student population, pictured a conventional middle class that even in the 1950s was ready to live in a society without racial, ethnic, or income barriers; valued such qualities as sincerity, honesty, and loyalty; and censured what they considered widespread laxity. A need for religion was also commonly recognized, but for one not governed by socially determined daily decisions. Despite their easy commitment to social conditions and to individual traits that are usually recognized as positive, these same students showed little inclination to make voluntary contributions to the public welfare or to seek influential roles in public affairs. They set great stock in a college education—particularly in their own college—and they

considered the greatest benefits of such an education to be vocational preparation and experience in social relations. The most striking characteristic of this group, however, was the trend to greater conformity to the prevailing profile (75:824).

Jacob could not attribute the impact of college on its students to any one curricular pattern of general education, model syllabus for a basic social science course, instructor, or type of instructional method. Although student values were found to change in college—and for some, the changes were substantial—they did not seem due to formal educational processes but to other interactions. Some institutions, for example, did appear to affect student values and some particularly magnetic or particularly sensitive teachers with strong value commitments did exert a strong influence on certain students.

Yet the very impression of failure conveyed by this report also provided the greatest impetus to evaluation that higher education had yet known. It stimulated a flurry of research concerned with colleges and universities and their students, administrators, and faculty—much of it reported in Sanford's *The American College* (68). And, despite varied criticisms of the Jacob report on the basis of its singularity, its emphasis on a uniformity among college graduates that obscured information about the impact of particular colleges, and its generally undifferentiated summaries of the research (56), it did act to stimulate in education an interest in belief systems parallel to that previously generated by other behavioral scientists.

CHANGING DIRECTIONS

Much has happened in American society since 1957, when the Jacob report first appeared. The general lethargy that marked the typical undergraduate student in the late 1950s and 1960s has been replaced by different sets of behaviors and, possibly, different belief systems. Taken as a whole, students are less possessive and tend not to separate their academic lives from the rest of the world. Questions of goals and values are now more secular, tied to society in general rather than to either religious or academic programs.

For many institutions, the traditional academic goal is to furnish the student with a broad general education and an appreciation of ideas. Other goals, however, transcend the merely educational. Vocational preparation and social development have assumed increasing significance in the curriculums established by many colleges. The ideal college student of today is seen as not only intellectually competent but also professionally and/or vocationally trained and socially adept—even adamant—in meeting demands of the world.

As institutions that have evolved in human society for the socialization of its members, schools may be seen as agencies of personal development as well as avenues for intellectual and cognitive growth and expression. Merely proclaiming "education" as a goal is hardly sufficient.

True education must be liberating and differentiating and, if the educational process has been successful, individuals must be seen as different from, rather than as mirror images of, others. Sanford maintains that

> . . . defining the goal of education, colleges must also distinguish it from indoctrination . . . [the] educational goal of a hypothetical college might well be the maximum development of the individual, bringing forth as much of his potential as possible, and setting in motion a process that will continue throughout his lifetime. This goal implies a development of certain qualities in a person which exist independently of any specialized skill or knowledge, qualities which are favorable to his leading a rich, productive life . . . and to . . . performing effectively as a citizen in a democratic society (67:41-42).

In addressing himself to the question of directions, Sanford points out that the actual goals of educational institutions and the means of achieving them frequently operate at cross-purposes. Thus, various goals must be weighed and then arranged in hierarchical orders of importance. To facilitate the process of ascertaining dominance, it might be expedient to ask such questions as: What kinds of change can colleges encourage in their students? What are the conceptions of academic goals fundamental to the institutions themselves? How do individual belief systems interact with the goals held by different reference groups? What developmental and enrichment programs for promoting the "whole" individual are felt to be tenable by all personnel—administration, faculty, students?

VALUE COMPARISONS

Some studies have addressed themselves to these or to similar questions. For example, McConnell (44), at the Berkeley Center for Research and Development in Higher Education, compared attitudes of freshmen and seniors in eight colleges.

In seven of these schools, a majority of the freshmen said they attached a great deal of importance to getting good grades, but, four years later, they did not consider grades so important—perhaps because they had already demonstrated their ability to meet academic requirements and, accordingly, to survive in college. Occupational values among these same respondents also changed. In their concepts of the ideal job, freshmen appeared more likely than seniors to attach great importance to money and security, while seniors tended to express an interest in jobs that provided opportunities to be creative and/or to use special talents.

Assessing student performance on inventories of religious beliefs and social values, Pace (53) and his co-workers administered 72 pairs of statements to over 700 seniors and 900 freshmen. Comparisons were made between several subsets: freshmen and seniors, men and women, different church groups, church participants and non-participants, and students enrolled in various colleges or curriculums. Between one-fourth and two-thirds of the freshmen entering Syracuse University seemed to have faith "in some reality greater than man's at work in the universe"

(53:54); approximately the same proportion of seniors felt the same, and similar accord was reached on measures of social values and religious beliefs. A similarity of goals was again noted when students and faculty were compared. Pace reported that the objectives cited by students as most important were "by and large . . . the [same] educational goals judged most important by the faculty. The faculty put vocational preparation somewhat lower on the list, put effective writing above effective speaking, and included effective citizenship among the top six" (53:11).

Although comparative studies of attitudes and beliefs are sparse at all levels of education, they are even more sparse at the junior college level. In one of the few studies that have been reported (70), students in a political science course were asked about such issues as the United States' intervention in different countries, freedom of speech on campus, and civil rights. In response to the statement that students were justified in demonstrating during the free speech movements on the University of California campus, most disagreement was found among the oldest age group—26 and over; the 19- to 21-year-old group was second highest in condemning the Berkeley "rioters." Authoritative and disciplinary attitudes held by parents and elders had a restraining influence on the behavior of younger students, as suggested by a greater tendency toward non-committed positions. On the whole, however, differences among age groups were not significant.

Qualities of support, conformity, recognition, independence, benevolence, and leadership were measured in a study of the interpersonal values held by 40 junior college students in a terminal course, 116 junior college students in a transfer course, and 93 university students (1). On the value of conformity, a significant difference was found between university students and each of the two samples of junior college students. On the leadership scale, university students scored higher than transfer students. No significant differences were found on other values. Discussing these results, Abbas suggested that junior college students may tend to score higher on conformity because they live at home. On the other hand, it may be that the university atmosphere, not the living conditions *per se*, attracts the non-conformist and/or fosters non-conformity. Perhaps this is why there has been less activism on community college campuses than at non-commuter, residential colleges and universities.

How do student and faculty values compare? One of the few investigations of values among junior college personnel was conducted by Blai to determine differences and similarities between students and faculty members (11). Adapted from the 246-item survey administered by Hadden (33), Blai's 95-item questionnaire was anonymously circulated among students and faculty at one junior college. Both groups responded in terms of a five-point scale, ranging from "strongly agree" to "strongly disagree." Of the 95 items, 42 attitudes were shared by a majority of the

junior college students and Hadden's population of 2,000 college seniors. However, contradictory views were expressed both by the junior college student group and Hadden's seniors and by the junior college students and the faculty.

When compatibility of goals between students and faculty is analyzed, faculties appear, more or less explicitly, to establish goals for their students that are accepted or rejected in varying degrees. In this sense, Flacks (26) reported that college instructors expected their students to be interested in ideas *per se;* to have knowledge of the culture and specialized information about specialized subjects; to have a serious regard for both the curriculum and faculty demands; to hold a common desire to be effective citizens; and to demonstrate principles of tolerance, rationality, and high-mindedness. On the other hand, Bolton and Kammeyer (13) pointed out that interests supposedly cultivated in the classroom and directly stimulated by faculty interaction are not, to any significant degree, carried over into peer-group interactions.

This general view of the lack of compatibility between student and faculty values has been supported by other studies. Some suggest that the influence of students' peers is more important than the influence of faculties and that reinforcements given by students' values to official values is a particularly important factor among college freshmen (74). Peer groups appear to be in a powerful position to facilitate a college's academic-intellectual goals (51), to offer emotional support (17; 27), and to reinforce values (68).

Citing differences in students and faculty attributable to different locations in the college structure, Feldman and Newcomb suggest that such variations must inevitably lead to diverse concerns and problems as well as to the development of somewhat distinctive cultures—"that is, distinctive shared sets of understandings about the environment and distinctive shared sets of actions congruent with those understandings" (24:229). Differences might also be expected in terms of

> . . . personality traits, attitudes, and values quite apart from any differences in orientation generated by their different roles in the social structure of the college.
>
> The values, norms, and shared orientations and expectations of a student culture are in part passed along from one generation of students to the next and in part rediscovered, or at least reinforced, by each succeeding generation as it passes through similar experiences [cf Hughes, Becker, and Geer, 1962]. To the extent that experiences are not similar for succeeding generations of students, the student culture probably undergoes some modification (24:230).

A number of studies comparing attitudes and opinions of students and faculty, gathered at the same time by means of similar or parallel instruments, are tabled (8A) in the second volume of Feldman and Newcomb's *The Impact of College on Students* (24). These investigations suggest that faculty and students differ particularly on the goals and

purposes of college as well as on more general life-goals. Faculties appear to place a greater emphasis than students on such goals and activities as the development of social competence, vocational training, participation in extracurricular activity, and the development of personal philosophies. Conversely, students stress the development of intellectual and moral capacities, academic achievement, and the acquisition of special skills and knowledge.

Different researchers, of course, emphasize different directions. Some found that faculty place more importance than do students on esthetic and theoretical values and less on political (power) values. In other colleges, faculty members focused on the attainment of professional experience and the improvement of social conditions, whereas students emphasized life objectives that involved home and children, social life, and income levels (42). On the whole, differences between students and faculty are seen as average differences with undoubtedly a good deal of overlap. As a case in point, Pace's study (53), cited earlier, indicated general agreement between these groups on the relative importance of 18 educational objectives, but less agreement on the absolute importance of two-thirds of the objectives.

In an attempt to determine the extent of agreement on perceptions of educational values held by students, parents, and faculty, Paetz (54) analyzed demographic data and 23 educational values classified into three groups, namely, the value of (1) a junior college, (2) a college education, and (3) a particular college. It was concluded that students are realistic in their value rankings; more females than males feel it important to live at home; students' rankings are closer to their parents' than to the faculty's; and students are not realistic in their career choice. It was also found that students and faculty agree on the importance of personal instruction; students err in perceiving their parents' values; and in spite of differences on specific items, all three groups agreed significantly on the overall ranking of values.

IN SUM

Many of these studies, together with others, indicate that a fair amount of thought has been given to the concepts of attitudes and values. Some of the available reports also allude to points of similarity and difference among different age and occupational groups. As with much of the research in higher education, however, it appears that our information is, at best, inconclusive; and, in light of the large national junior college enrollment, this lack of data is especially unfortunate. Together with so many other issues, much more must be known before we can understand the value structures and perspectives held by the students, faculty, and staff of this institution.

PART TWO

chapter 5 THE STUDY

The study of student/staff values reported here constitutes one phase of a larger study coordinated by the ERIC Clearinghouse for Junior Colleges at UCLA. The overriding purpose of this project was to develop guidelines for institutional assessment—hence, program development—with consideration of specific characteristics of junior colleges, student bodies, faculties, and administrative staffs. The three schools ("Urban," "Suburban," and "Rural") from which the subjects were drawn are all located within a 75-mile radius of Los Angeles.

There is some evidence that colleges manifest the characteristics of their regions (46). While no one institution can ever duplicate another, these schools are seen as quite like junior colleges throughout the country. The particular characteristics, therefore, may be of interest to others who see in them certain similarities to their own institutions.

THE SCHOOLS

Urban College, established in 1927, is a large community college. Like many other inner-city schools, it has weathered a number of changes more or less successfully—not the least of which has been a changed ethnic composition that reflects a changing community.

At one time, Urban College was a "rah-rah" school. It boasted a nationally recognized football team; it took pride in the number of its graduates who went on to four-year colleges and universities; and it was viewed with respect by its supporting community. As an institution representing primarily a White, middle-class population, it acted as an agent of upward mobility. "Going to college" meant a step up the ladder for many of its students and, less directly but perhaps as importantly, for their parents.

During the years since Urban College was established, it has undergone several changes along with its supporting community. Now, at a time when going to college has become more the expected than the unique, when most institutions of higher learning are marked by expanding enrollments, Urban College has relatively few students (2,702 in 1969-70; 3,400 in the current 1970-71 academic year). In fact, in some courses necessary for the continuation of state credentialing, fewer than ten students are enrolled. And, because of this enrollment picture, few new faculty members have been employed in recent years. Pride in the football team, in the school publications, and in other such activities has dissipated. The student population has changed from primarily White to a mixed composition about 40 per cent White, 40 per cent Black, and some mixed minority groups. Whereas in the 1930s a considerable number of students transferred to universities from this school, only about 340 now obtain an A.A. degree and less than 500 go on to further schooling—at least immediately after graduating from this school.

The college still has its lovely grounds and interesting clustered layout —assets with potential creative arrangements. It still has recreational facilities—even a new recreational program—and an enthusiastic administrative staff. It is still far from a "has been," but it has seen happier days and knows it.

Suburban College is the antithesis of Urban College. Built in 1966, it is a fairly large and growing school (4,367 day students in 1970) in an expanding community that already had one established junior college. Although it is now a bedroom community, in that most of the population commutes to work, new industries and businesses may soon change its complexion. Perhaps then the school will be a true vector of the community, but now it has a rather sheltered feeling—like a fortress, or perhaps a castle—apart from the city. Suburban College is a self-styled innovative institution, a number of its faculty having been recruited from the older college in the area just because they wanted to "innovate." Its newest audiotutorial designs are sources of pride to faculty and staff, as are the carrels and creative laboratory setups that have become an integral part of this system. The technical media are used by students as essential components of their courses and of the curriculum as a whole, not merely as adjuncts to other courses or programs. Unfortunately, this is not always the case when schools embark on a program of advanced multi-media instruction.

Like the physical aspects of the school, the attitudes of the administrators of Suburban College are particularly refreshing. In fact, one would probably be quite accurate in concluding that the people who run the school, not the innovative equipment, define its uniqueness. There is a contagious spirit in this college—an eagerness and desire to create something new and effective that, despite all the *esprit* of many who enthusiastically advocate innovation, are all too rare in other institutions.

Perhaps one of the greatest differences between Suburban College and

many other junior colleges throughout the country is that it does not appear to be an agent of upward mobility for its community. In fact, the reverse may well be the case. Whereas many students in the two other schools—as, indeed, in schools throughout America—are the first in their families to go to college, many here have parents who are themselves college graduates. Thus the school performs a different function—it serves to *maintain* the status quo, to catch students who perhaps themselves couldn't care less about further schooling, but who enroll in college because of parental expectation.

Rural College, while it has certain similarities, is notably different from the other two examined in this study. It is small (714 day students in 1970), comparatively new (established in 1962), and its few faculty members appear to be pretty well steeped in the mandates of the administrative staff. Whereas Urban College is potentially an agent of upward mobility, and Suburban College acts as a control to limit downward mobility, this school functions more as a traditional, self-contained college in a rather isolated rural area. With approximately 48 per cent of its students going on to four-year colleges and universities and with so few students whose parents have gone to college, it acts as a springboard for socioeconomic upward movement. Its student population, however, has something of a mix, with 3 per cent Black students, 7 per cent Chicanos, and 1 per cent from other minority groups.

THE SUBJECTS

The subjects for this study were selected from two different populations: freshman students enrolled in our three community colleges and staff members of these schools. The staffs were then divided into faculty and administrators.

There were 1,877 students in the three schools—of the total, 1,044 were males and 821 females (12 respondents did not indicate sex); they ranged in age from 16 to over 27 years, with a median age of 17.2. (Further breakdowns according to age, sex, and subject-matter designations are reported in the next chapter, with results of the investigation of value hierarchies among these subjects.)

The faculty of all three schools ranged in age from less than 25 to over 40, with a median of 40 years; 155 of these instructors were male, 83 female. Administrative staffs responding to the survey included two of the three presidents of the subject schools, 28 administrators from all three schools, and 10 subjects who identified themselves as being primarily engaged in counseling and psychology. The combined responses from both faculty and administration are presented as one group and compared with those of the students.

INSTRUMENTS

Data from three separate instruments were used for the portion of the project reported here. Two instruments were administered to the student population; a third, to the staff.

I. *The Omnibus Personality Inventory* (OPI) is a paper-and-pencil test developed by Heist, Yonge, McConnell, and Webster (34). In response to a recognized need to study several characteristics of college students, the OPI was designed within the context of particular theoretical considerations for "normal" college populations. These principles included certain assumptions regarding human behavior, measurement theory, technical criteria for test construction, and knowledge of the social aspects of college student life.

Different forms of the OPI have been employed in a number of projects on similar campuses throughout the country—for example, Antioch College, Colorado College, Michigan State University, San Francisco City College, and the University of Michigan. In a study of 2,000 members of the 1961 UCLA freshman class, certain scores were found to correlate highly with students who did not remain in school; other scores were representative of successful Peace Corps candidates (35).

The OPI consists of 385 items to which the subject responds true or false. An hour is usually required for response to this instrument; since, however, in a previous study (18) junior college freshmen found this time insufficient, our freshman population was allowed one and one-half hours.

The items comprising this inventory were selected for their relevance to academic activities and/or for their potential usefulness in understanding and differentiating among college students. On most of the 14 scales of Form FX (the form used in this study), standard scores of 60 (84th percentile or above) may be considered sufficiently high for the respective definitions to apply. Appendix A contains descriptions of these scales.

II. *The 3-D Freshman Survey* is a questionnaire especially developed for this junior college study. Its many items were included not only to provide actuarial information (sex, family, etc.) but also, and to a greater degree, to elicit responses regarding attitudes, values, feelings, past experiences, and goal directions. Although most items were designed for this instrument, it also incorporates Pace's abbreviated CUES (College and University Environment Scales), selected items from the Pace/Trent higher education project, and Rokeach's scales of terminal and instrumental values, Form E. It takes approximately one hour for response but, again, one and one-half hours were allowed.

III. *The Faculty Survey* is based on the rationale described in *The Person: A Conceptual Synthesis* (14), which presents a theoretical foundation for this survey. Like the larger freshman inventory, this survey, administered to instructors and administrative staffs in the three colleges, included items designed especially for this population. It also included items from Pace's CUES; the Pace/Trent studies; and Rokeach's *Values,* Form E scales. In addition, one item (*#356*) was selected because it discriminated between authoritative and flexible faculty members, as described in a study conducted by a group from the Center for the Study

of Higher Education, Berkeley (55). This instrument takes approximately 20 minutes for response.

PROCEDURES

At the beginning of the fall term 1969, the staff surveys were administered to instructors and administrative staffs of the three junior colleges. Members of the UCLA/ERIC staff administered the survey in group meetings in two schools; in the third, the surveys were administered by the junior college staff in conjunction with an orientation meeting.

Members of the UCLA/ERIC staff and personnel from the participating schools administered the student surveys in September 1969 in four separate sessions: two at the larger school and one at each of the two smaller schools. At the end of the second semester (spring 1970) the student survey was again given in a group setting at the three schools.

The data were subjected to statistical analysis. The results from that portion of the surveys eliciting responses to Rokeach's value scales, with which this monograph is concerned, are presented in the final chapter.

FINDINGS AND DIRECTIONS

chapter 6

When we use attitudes and values as bases for comparing individuals within any given population, we find ourselves better able to understand both basic similarities and basic differences. Fundamental to such comparisons is the awareness that, just as values of one group may differ from those of another, so the values of different individuals in the same group may vary.

To perceive people along the dimensions of belief systems, it is necessary to adopt a phenomenological point of view. In this sense, an attempt must be made to get within the framework of the individuals themselves—to look at the world from their point of view, not merely from our own. At best, this is a difficult task. It can be simplified, however, by the use of a semi-structured, projective device such as the values scales developed by Rokeach and used in the study reported in this monograph.

For our purposes, the examination of belief systems through an individual's own hierarchical ordering of his values presents an operationally feasible, relatively objective and straightforward approach to understanding the people who function in our schools. Actually, this examination of beliefs—although somewhat indirect—is nevertheless an effective way of focusing on educational structures. Although occasionally this approach has been used to look at secondary school populations and, in recent years, to examine people in higher education, it has seldom been used to determine the impact of college on both students and staff. Even less frequently have such variables been used to understand the junior college in terms of its people or the differences that exist between the generations.

Our examination of the students and staffs of three California junior colleges was an initial attempt to look at belief systems of the total population, male and female, older and younger subjects, and people designating specific majors or teaching in various subject fields. This chapter reports the findings of these investigations. Appendix A includes a note on the statistical analysis of the data. Appendix B presents all tables described in this chapter.

COMPOSITE GROUP

Following the basic assumption that values may well provide a key to understanding the generation gap, we looked at student and staff responses to Rokeach's terminal and instrumental value scales. These are discussed in terms of the median rankings of values of students and staff in our total group of 1,877 students and 238 staff members--faculty and administrators.*

In Table I (Appendix B), the value assigned the highest rank for the combined population was *Happiness;* second was *Freedom;* and third, *Mature Love.* The three values ranked lowest by the total population were *National Security* (16), *Social Recognition* (17), and *Salvation* (18).

When we compare students (N = 1,545) with staff (N = 180), we find that students rank their primary values in order of importance as *Happiness, Freedom,* and *Mature Love,* while the staff chooses *Self-Respect, Sense of Accomplishment,* and *Freedom.* Of the 18 possibilities, only five values are ranked in the same order by each group or differ by only one point--*Equality, Family Security, Freedom, National Security,* and *True Friendship.* There were some notable differences. *Sense of Accomplishment* varies 10 points from a median ranking of 12 for the students to 2 for the staff. *Comfortable Life* is rated 4 by the students and 13 by the staff, a difference of 9 points. Next comes a 7-point difference for *Inner Harmony,* ranked 11 by students and 4 by staff, and for *World at Peace,* 7 for students and 14 for staff. There is a 6-point difference for *Happiness,* which is rated 1 by students and 7 by staff. Five-point differences are shown on *Mature Love,* rated 3 for students and 8 for staff, and on *Self-Respect,* ranked 6 for students and 1 for staff. Looking at the results of the median test in Table I, we note that *Equality* accounts for a p-value of $<.01$ while 12 other values show significant differences of $<.001$.

Beyond these explicit differences, what do the values indicate about the generation gap? In one sense, the students seem more inner-oriented than the staff. They value *Comfortable Life, Happiness, Mature Love,* and *Freedom.* (Whether the last implies freedom for themselves as individuals or for the population as a whole we do not know.) Apart from their primary value of *Freedom,* the staff, on the other hand, stress *Self-Respect* and *Sense of Accomplishment. Inner Harmony,* important for the staff, is not as important for the students, possibly because they have not yet acquired an appreciation of that quality. Other differences are notable but do not emphasize the inner-outer orientations noted by the values ranked first in importance.

Table II presents the instrumental values for the students and staffs in our three community colleges. When the total group is combined, students and staff (N = 1,687), the values ranked highest are *Honest, Loving,* and *Ambitious,* while the values ranked least important are *Polite, Imaginative,* and *Obedient.* Looking at the median ranks for the students and comparing them with the staff, we note tremendous differ-

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* Of the total 2,115 respondents, not all answered all questions, therefore, subtotals mentioned hereafter in this chapter do not necessarily match this total.

ences between the groups. For example, although *Honest* is rated first by both staff and students, students choose *Loving* as their second value and *Ambitious* as their third. The staff select *Responsible* as second (fourth for the students) and *Capable* as third (ranked only eleventh by students). The values least esteemed by students are *Logical, Imaginative,* and *Obedient,* whereas the staff select *Polite, Clean,* and *Obedient.* We thus find only the values ranked top and bottom to be similar and note only one- or two-point differences between *Forgiving, Helpful, Independent, Polite, Responsible,* and *Self-Controlled.* The significance of these findings is corroborated by p-values based on the median test. Significant differences of $<.001$ are noted for the values of *Ambitious, Capable, Cheerful, Clean, Courageous, Imaginative, Intellectual, Logical, Loving, Obedient, Polite,* and *Responsible.*

One of the most interesting findings occurs with the value *Ambitious*—ranked third by the students and thirteenth by the staff. One wonders why such a decided difference on this value, especially since so many instructors are quick to suggest that their students lack motivation and ambition. Could it be the staff themselves rather than the students who lack the quality of ambition? Or is it, indeed, that one does not value what one has? The latter question demands considerably more study by other researchers using these value scales.

Although there seems to be no particular constellation of student values, the staff's responses appear to represent the Protestant Ethic, to which many of them probably adhere. *Honest, Responsible,* and *Capable* all sound as if one who valued them highly were dedicated to his work and to the concept of a good day's work for value received. One might then ask why *Obedient* and *Polite* are ranked so low, an answer to which might be found by looking at the value *Independent,* ranked fairly high by each group. For both staff and students, these findings are consistent with Rokeach's report of religious groups (61). Here the subjects all de-emphasize *Clean, Obedient,* and *Polite,* and are consistent with Rokeach's "non-believers who 'put relatively less emphasis' . . . on such Boy-Scout values as being clean, obedient, and polite" (61:35).

AGE Tables III, IV, V, and VI present the values according to "older" and "younger" age groups. The terminal and instrumental values for students as shown in Tables III and IV; those for faculty, in Tables V and VI.

In discussing these results, we must first note that in the three schools combined only 125 students were aged 23 years or older, while 1,472 were 22 or younger. As mentioned above, such a great difference in sample size might affect our findings considerably; therefore, interpretation of these results must be seen as particularly tentative.

For students 23 or older, the first three values were *Family Security, Happiness,* and *Self-Respect;* the last three were *Salvation, Social Recogni-*

tion, and *World of Beauty*. The students 22 years of age or younger ranked their primary three as *Happiness*, *Freedom*, and *Mature Love* and their least important as *Salvation*, *National Security*, and *Social Recognition*. Statistically significant differences ($p = <.01$) were found between *Family Security*, *Inner Harmony*, and *World at Peace*. There is sufficient similarity between these two groups to indicate that age differences are not nearly as great as the differences between students and staff combined. In fact, we might say that the age differences are neither too great nor too different for a true comparison to be made. How, for example, does a 22-year-old differ from a 23-year-old? More important might be the actual differences between the role of the staff member and the role of the student.

When students 22 years of age and younger are compared with 23-year-and-older students, this comparison also holds for the instrumental values. The older group ranked *Honest*, *Ambitious*, and *Responsible* as their highest values, whereas the younger group selected *Honest*, *Loving*, and *Ambitious*. The values ranked least important were identical for both these groups: *Logical*, *Imaginative*, and *Obedient*. There were no significant differences. We must note that our populations differ considerably in number (for example, for the instrumental values there were only 98 students in the 23-or-older group and 1,206 students in the 22-or-younger group). We wonder whether it is really appropriate to compare a 22-year-old with a 23-year-old and assume that the one year can make such a difference. It is true that some students were considerably older, but they were few and far between.

Looking at both the terminal and instrumental values for faculty (Tables V and VI), who are divided into two age groups (younger and older than 39 years), we find some greater differences, but they are not nearly as great as those between the combined student and staff populations. For terminal values, the sample sizes are similar--95 staff members older than 39, and 85 younger than 39; for instrumental values, 94 staff members were 40 or older, and 89 were 39 or younger. It can be noted that both older and younger staff members select *Self-Respect* for their first value and *Sense of Accomplishment* for their second; the older group chooses *Freedom* as its third value and the younger group chooses *Mature Love* as its third value. Looking at the values deemed least important, the rank orderings are similar. Older faculty and staff members cite *Pleasure*, *National Security*, and *Salvation*, whereas the younger ones choose *World at Peace*, *National Security*, and *Salvation*. The congruence is readily apparent, with the greatest differences found only in terms of *Mature Love*, *Family Security*, and an *Exciting Life*. On the whole, little can be said about the differences in terminal values when examined according to faculty age groups. The only statistically significant differences (<.01) were two ranked near the middle--*Mature Love* and *National Security*.

The instrumental values for faculty (Table VI), divided according to age groups, also show greater similarities than differences. At the *p*-value

of <.01, the only significant difference was found for *Courageous.* An across-the-board first choice for both older and younger staff members is the value *Honest.* Further similarities are also apparent for their second choice of *Responsible,* but the third choice for older staff is *Capable* and for the younger group it is *Loving.* Again, however, these differences are not nearly as great as the differences between students and staff, a finding that fails to corroborate a recent statement of Hodgkinson:

> Until the recent declines in birth rates have an effect on the population distribution, in fifteen years or so, we will be living in a Juvenocracy in which the value orientations of the young will compete with those of the old. Political power will continue to be in the hands of the older citizens, but youth will fight that power at every turn and block its effectiveness (36:1).

SEX Tables VII through XII, which present the terminal and instrumental value rankings of males and females, show several differences. Although both males and females choose *Happiness* as their first value, this is one of the few cases in which their values agree. In fact, in only three other instances in this comparison are the differences no greater than one. After their first-ranked value of *Happiness,* the females ranked *Mature Love* and *Self-Respect,* whereas the males chose *Comfortable Life* and *Freedom.* The values ranked least important by females were *World of Beauty, National Security,* and *Social Recognition,* while the males ranked *National Security, World of Beauty,* and *Salvation* least important. The greatest differences appear in the value *Comfortable Life.* Perhaps the male students are already beginning to assume the so-called masculine responsibility for maintaining the financial security of the home.

On the instrumental scales, the women students rank *Honest, Loving,* and *Responsible* as most important, while the men select *Ambitious, Honest,* and *Loving.* (The ranking of *Ambitious,* incidentally, seems to corroborate the high rank of *Comfortable Life* by males in the same student population.) Examining the values least important for women, we note *Logical, Imaginative,* and *Obedient,* whereas *Polite, Imaginative,* and *Obedient* are least important for males. The low ordering of *Obedient,* perhaps as well as any other value, reflects the times.

Tables IX and X present the terminal and instrumental values for the combined staff, divided according to sex. In this case, we have a larger discrepancy in the number of respondents than in the case of the student population, with 118 males and 62 females responding to the terminal values and 119 males and 64 females rating the instrumental values.

While comparisons are difficult with such disparate numbers, we still find that the similarities are considerably greater than the differences—only two statistically significant differences were found. The female staff members rank *Self-Respect, Sense of Accomplishment,* and *Freedom* highest; the males select *Sense of Accomplishment, Self-Respect,* and *Family Security.* Accordingly, we might hypothesize that the role assumed by

the faculty or staff member is actually greater than any differences that might appear in terms of his or her sex—that is, when an individual decides to adopt the teaching role (or the role of the educator), he generally becomes more like other teachers, regardless of sex. Similar conclusions persist for the values ranked least important, with *National Security, Pleasure,* and *Salvation* cited last by females and *Pleasure, National Security,* and *Salvation* last by the males.

Both male and female staff members rate *Honest* at the top—indeed this value proves to be consistently popular. Beyond this agreement on the first value, differences appear in the females' second and third choices of *Loving* and *Responsible,* and the males' preference for *Responsible* and *Capable.* The instrumental values ranked lowest by both males and females are also similar, with females ranking *Polite, Clean,* and *Obedient* as least important and males ranking *Clean, Polite,* and *Obedient* as their sixteenth, seventeenth, and eighteenth choices. These least important values are consistent with those of students across the board.

More interesting differences occur in Tables XI and XII, wherein we compare the terminal and instrumental values of the combined student/staff males with those of the combined student/staff females. The males (N = 967) ranked *Happiness, Freedom,* and *Comfortable Life* first. The females (N = 758) also chose *Happiness,* but differed in their second and third choices of *Self-Respect* and *Mature Love.* One of the greatest differences is seen in the value *Comfortable life.* This was third highest for males and eleventh for females, corroborating our earlier suggestion that this hierarchical ordering of values may well indicate the male sense of financial responsibility toward his family, whether real or intended. Other rank differences between males and females are found for the values *Exciting Life* (5 points), *Equality* (4 points), and *Inner Harmony* (4 points). Significant differences were found for ten values. However, no particular pattern appears to show inner-directed versus outer-directed values, as when we compared students and faculty as a whole.

Looking at the instrumental values for the combined groups (male students and staff versus female students and staff), we find that *Honest* is ranked highest by both groups. Males rank *Ambitious* and *Loving* next, while females select *Loving* and *Responsible* as second and third choices. Again we note that the values least esteemed by the males are *Imaginative, Polite,* and *Obedient;* by the women, the least esteemed are *Logical, Imaginative,* and *Obedient.* Here, too, we might consider traditional values, roles, and self-images.

MAJORS

Our final analysis of these data concerns designated academic majors for both student and staff groups. Tables XIII and XIV present the terminal and instrumental values for students who indicate their school major; and Tables XV and XVI show the values according to the faculty's teaching area.

Examining the student data first, in Table XIII we find few differences among the people designating any one of the following categories: *Business Administration, Engineering/Technology, Humanities/Arts, Languages, Mathematics, Science, Social Science, Other, Don't Know,* or *Education*. Among people in these fields, the few statistically significant differences at the p = <.01 level are between the values *Comfortable Life, Family Security, Inner Harmony,* and *World of Beauty*. It is difficult to infer any particular patterning, however, because the various majors seem to neutralize whatever differences there are (for example, whereas the business administration majors value most a *Comfortable Life,* the language majors rank it only thirteenth). Looking at the median ranking, the differences do not appear so great. Business administration majors cite a *Comfortable Life, Happiness,* and *Family Security* as their three top values, supporting the general stereotype of the business major. Their least important values (*Salvation, Social Recognition,* and *World of Beauty*) do not, however, seem consistent with the typical image.

Engineering students also point first to *Happiness* and rank next a *Comfortable Life* and *Freedom*. Their least important values are *World of Beauty, Social Recognition,* and *Salvation*. Humanities/arts majors select *Happiness, Mature Love,* and *Freedom* as their primary values and *Salvation, Social Recognition,* and *National Security* as their last. Again, as in the other analyses, the least important values appear more consistent than the most important.

Looking at the students with a language major (here we find only 36 students, considerably less than in any of the other groups, which number at least 129), we find *Mature Love, World at Peace,* and *Self-Respect* as their top three values. Greater differences are to be found in the mathematics and natural science majors, whose top selections are *Happiness, Freedom,* and *Mature Love* and whose lowest choices are *National Security, World of Beauty,* and *Social Recognition*. It is interesting that *World of beauty* is ranked low by all majors, although some put it in their lowest ratings and others in the low-middle. Social science majors again chose *Happiness,* the value also indicated by the groups marked Other, Don't Know, and Education. The values ranked second and third by humanities majors are *Mature Love* and *Freedom,* whereas their lowest ratings are *Salvation, Social recognition,* and *National security*. Social science majors select *Freedom* and *Mature love* as second and third, the values also ranked high by the *Other, Don't Know,* and *Education* subsets. For these subjects, the values deemed least important are similar to the other groups. Perhaps if natural science and engineering majors were combined and if humanities and social science majors were joined, we might find some differences, but this type of inquiry, of course, remains for future studies.

Looking at the students' ordering of instrumental values (Table XIV), the significant differences are in the values *Clean, Imaginative,* and *Obedient*. However, where differences appear between two different groups, the combined groups so neutralize most of them that they appear

less important. In this case, we suggest that the reader examine the particular groups that interest him most.

Looking at the terminal and instrumental values for faculty members, divided according to teaching fields (Tables XV and XVI), we find again that such differences as exist are minimal compared with differences that might be found if we examined just one or two groups—as in the case of natural science and mathematics teachers versus the social science/humanities faculty. Again we ask the reader to look at the tables themselves (Appendix B) in terms of the actual population that interests him most (for example, he might note that the value *Self-Respect* is consistently high for all groups whereas *Happiness* varies considerably, as do *True Friendship* and *World at Peace*). In this case, faculty disparities are often so small that it is difficult to draw any inferences on just what they really indicate.

FURTHER DIRECTIONS

Since belief systems are fundamental and central features of the individual personality, the position taken throughout this monograph has been that they may well provide a key to better understanding the functioning of members of varied populations. Described here are standards or criteria that have to do with modes of conduct and end-states of existence. Values are seen as potentially meaningful, objectively measurable dimensions for making group comparisons; thus they serve as important in-puts for understanding various people.

In our study of the value system of staff members and students in three California junior colleges, we have noted that the actual role of student or teacher seems to affect the value system more than any other variable—sex, designated major, or age. There is an obvious difficulty in interpreting ages from our discrete data—that is, how different is a 22-year-old from a 23-year-old? However, it still seems that, if age were really an important factor, it would have shown greater discriminatory powers.

Beyond the fact that the role designation (student or staff) appeared to differentiate most significantly among members of our population, perhaps the most important conclusion to be drawn from this investigation is that values do indicate one potentially fruitful way of examining people. Further, they present an operationally feasible approach to the comparison of various groups according to basic and what seem to be relatively enduring dimensions of personality. In addition, values present a way in which people from many population subgroups may arrive at common goals. They have something to say to those particularly involved in philosophy, education, political science, anthropology, and economics as well as in psychiatry, psychology, and sociology. Accordingly, these concepts might act as foci of concern among people who operate in various areas (58). "The value concept, a dynamic concept with a strong motivational component as well as a cognitive one, has to do with

affective and behavioral components. Accordingly, it may be used as a means for assessing not only underlying features of the individual personality but for predicting future behavior." This remains for further investigation to establish.

Before findings such as these can be used to predict human behavior under designated and specific conditions, we need much more information. How consistent, for example, are these attitudes and values? Will studies of a longitudinal nature replicate our present findings? How valid are overt behavior predictions made on such underlying and fundamental dimensions as values? Beyond the similarities and differences based on the value structures investigated in this project, what other differentiating dimensions of various populations are there?

This monograph describes an initial attempt to answer some of these questions. We know, for example, that values do discriminate in terms of role—in fact, our greatest differences occurred between the composite student population and the composite staff population. In other words, value structures seem to be more closely tied to role affiliation than to sex or discipline. We recognize also certain differences in the belief systems of male and female groups, but whether these persist throughout the years remains to be seen. We also know that, at least when age differences are minimal, they seem to be less important than differences stemming from role affiliation. And we know that research with different instruments may provide information not so easily discerned in the more objective paper-and-pencil investigations. Before further conclusions are drawn, however, we must also recognize that follow-ups provide equally important information. Therefore, for a study of values to be truly effective and predictive, we must think in terms of a continual series of investigations. Continuous or longitudinal investigation appears feasible through the use of such scales as those developed by Rokeach and used in the studies reported in this paper.

APPENDIX A

STATISTICAL NOTES*

The statistical methods employed in the study are as follows: for each case (role affiliation, sex, age, major), the sample was separated into appropriate groups (for example, male and female students). Then, for each of the 18 values considered, the median response of the groups was computed as well as the median response for the total sample. It should be pointed out that the medians were computed using the standard technique for grouped data (52:273). The median test, to determine if the groups represented samples from populations with the same median, was performed; once the medians had been computed for all 18 values, they were ranked. For the convenience of the reader, both Chi-square values (χ^2) and ranks appear in the tables.

Two points of clarification should be made regarding the results. First, although the size of the medians for the groups sometimes appears close, significance by the median test is established. This result is explained mainly by the relative sample size of the two groups. Because of the nature of the study and because of population size differences, it was not always possible to achieve equality in sample size (for example, student samples are always much larger than staff samples). As a result, the total median (on which the median test is ultimately based) is heavily weighted by the groups with the largest sample sizes.

Secondly, the results may be interpreted from two points of view. If one is primarily interested in the relative order of importance of the values among the groups, he will look at the general pattern of the ranks of the medians for each group. On the other hand, one can gain important information by considering the level of the medians for the values. Here his attention would be directed toward the results of the median test. At this point perhaps an example would be appropriate. Figure A graphically represents the results of Table VIII.

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* The statistical analyses, Figure A, and all tables were made by Thomas B. Farver, who also wrote this note on the methods employed.

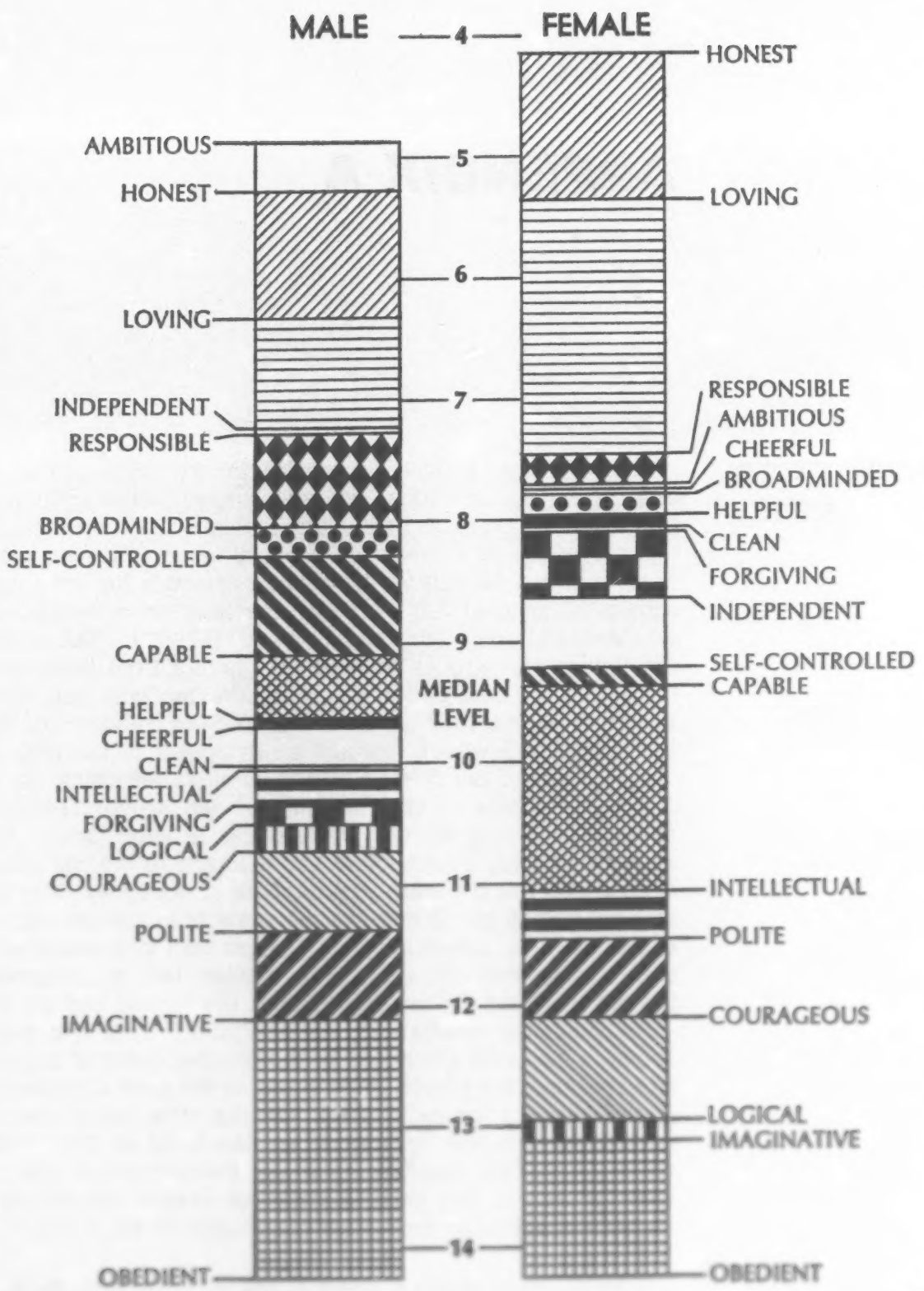

Figure A. Comparison of Male and Female Students in Ordering of Instrumental Values

Figure A gives an example of lack of one-to-one correspondence between the size of the p-values for the median test and the agreement or lack of agreement among the median ranks for the groups considered for the value *Capable*. The median test fails to establish significance for the medians of the male and female populations, yet, on final analysis, females ranked the same value four points lower than did the males. Figure A points out that the value *Capable* is in a group of values less differentiated by male students and, in future tests of this type, it would probably achieve a rank more comparable to that for females. The figure also demonstrates that female students tended to differentiate less among those values they ranked more important, whereas the male students differentiated less among those values they ranked less important. Other interesting bits of information can be gained by looking at the values adjacent to a value at the same level for both groups. For example, where one sees the value *Polite* as a base value for both male and female students, one also notes that female students regard the values *Courageous* and *Logical* as the next two less important values, while the male students place these two values not only in opposite order of importance but also above *Polite* in their hierarchy of values.

Thus, it should be clear that important information can be obtained from the results of the median test. In this monograph, primary attention has been directed toward relative order of the values and thus we look to the actual ordering of the medians, the ranks.

TABLE I
MEDIAN TEST COMPARISON OF STUDENT AND STAFF IN ORDERING OF TERMINAL VALUES

Terminal Value	Student N=1545 Median	Rank	Staff N=180 Median	Rank	Total N=1725 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Comfortable Life	6.94	4	11.69	13	7.41	6	69.91	<.001
Equality	8.53	10	9.53	11	8.64	10	7.06	<.01
An Exciting Life	10.04	13	9.13	10	9.98	13	1.74	<.20
Family Security	6.98	5	7.19	6	7.00	4	0.00	<.975
Freedom	6.04	2	6.50	3	6.08	2	1.05	<.40
Happiness	4.93	1	7.36	7	5.12	1	39.27	<.001
Inner Harmony	9.81	11	6.86	4	9.46	11	58.67	<.001
Mature Love	6.26	3	7.73	8	6.40	3	12.62	<.001
National Security	13.71	17	15.20	17	13.94	16	43.21	<.001
Pleasure	11.20	14	13.77	16	11.51	14	56.00	<.001
Salvation	13.67	15	17.07	18	14.13	18	68.55	<.001
Self-Respect	7.39	6	5.04	1	7.10	5	41.85	<.001
Sense of Accomplishment	9.92	12	5.27	2	9.52	12	114.88	<.001
Social Recognition	14.15	18	12.95	15	14.02	17	11.84	<.001
True Friendship	8.49	9	7.93	9	8.43	8	2.34	<.20
Wisdom	8.40	8	6.97	5	8.24	7	15.15	<.001
World at Peace	7.95	7	12.78	14	8.63	9	121.34	<.001
World of Beauty	13.69	16	10.55	12	13.36	15	54.83	<.001

TABLE II
MEDIAN TEST COMPARISON OF STUDENT AND STAFF IN ORDERING OF INSTRUMENTAL VALUES

Instrumental Value	Student N=1304 Median	Rank	Staff N=183 Median	Rank	Total N=1487 Median	Rank	Median Test Degrees of Freedom: 1 x^2	p-value
Ambitious	6.19	3	9.97	13	6.69	3	45.91	<.001
Broadminded	7.94	6	7.03	4	7.77	5	6.06	<.025
Capable	9.23	11	7.00	3	8.97	9	28.76	<.001
Cheerful	8.79	8	10.80	15	9.13	10	21.00	<.001
Clean	9.20	10	14.42	17	9.90	12	131.80	<.001
Courageous	11.35	14	8.17	6	11.03	14	33.54	<.001
Forgiving	9.27	12	10.03	14	9.41	11	4.08	<.05
Helpful	8.96	9	8.55	8	8.88	8	0.60	<.90
Honest	4.67	1	4.50	1	4.66	1	0.06	<.80
Imaginative	12.57	17	9.70	12	12.25	17	44.89	<.001
Independent	7.84	5	8.25	7	7.90	6	1.02	<.40
Intellectual	10.48	13	9.17	10	10.23	13	15.46	<.001
Logical	11.73	16	9.22	11	11.34	15	47.03	<.001
Loving	5.93	2	7.33	5	6.08	2	11.41	<.001
Obedient	14.29	18	16.89	18	14.75	18	119.97	<.001
Polite	11.43	15	14.34	16	11.90	16	57.76	<.001
Responsible	7.36	4	5.82	2	7.12	4	32.92	<.001
Self-Controlled	8.60	7	9.10	9	8.64	7	0.17	<.70

TABLE III
MEDIAN TEST COMPARISON OF TWO STUDENT AGE GROUPS IN ORDERING OF TERMINAL VALUES

Terminal Value	22 or younger N=1422 Median	Rank	23 or older N=123 Median	Rank	Total N=1545 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Comfortable Life	6.84	4	8.00	9	6.94	4	1.78	<.20
Equality	8.50	9	8.77	10	8.53	10	0.26	<.70
An Exciting Life	9.99	11	10.40	13	10.04	13	0.18	<.70
Family Security	7.18	5	3.61	1	6.98	5	19.20	<.001
Freedom	5.98	2	6.50	5	6.04	2	0.48	<.50
Happiness	4.91	1	5.14	2	4.93	1	0.55	<.50
Inner Harmony	9.99	12	7.36	7	9.81	11	9.64	<.005
Mature Love	6.25	3	6.30	4	6.26	3	0.00	—
National Security	13.81	17	12.13	14	13.71	17	5.05	<.025
Pleasure	11.07	14	12.83	15	11.20	14	5.60	<.025
Salvation	13.65	16	13.90	16	13.67	15	0.02	<.90
Self-Respect	7.50	6	5.70	3	7.39	6	4.34	<.05
Sense of Accomplishment	10.00	13	7.50	8	9.92	12	4.37	<.05
Social Recognition	14.15	18	14.08	17	14.15	18	0.00	<.975
True Friendship	8.43	8	9.10	11	8.49	9	1.28	<.30
Wisdom	8.51	10	7.32	6	8.40	8	4.40	<.05
World at Peace	7.73	7	9.58	12	7.95	7	7.35	<.01
World of Beauty	13.57	15	15.05	18	13.69	16	3.80	<.10

TABLE IV

MEDIAN TEST COMPARISON OF TWO STUDENT AGE GROUPS IN ORDERING OF INSTRUMENTAL VALUES

Instrumental Value	22 or younger N=1206 Median	Rank	23 or older N=98 Median	Rank	Total N=1304 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Ambitious	6.22	3	5.80	2	6.19	3	0.06	<.80
Broadminded	7.99	6	7.25	5	7.94	6	0.35	<.70
Capable	9.29	12	8.56	9	9.23	11	1.00	<.50
Cheerful	8.66	8	9.89	11	8.79	8	2.20	<.20
Clean	9.12	10	10.50	12	9.20	10	1.75	<.20
Courageous	11.38	14	10.63	14	11.35	14	0.11	<.80
Forgiving	9.16	11	10.50	12	9.27	12	1.39	<.30
Helpful	8.98	9	8.25	7	8.96	9	0.56	<.50
Honest	4.68	1	4.50	1	4.67	1	0.01	<.90
Imaginative	12.59	17	12.29	17	12.57	17	0.04	<.90
Independent	7.73	5	8.76	10	7.84	5	2.36	<.20
Intellectual	10.67	13	8.50	8	10.48	13	4.79	<.05
Logical	11.77	16	11.25	16	11.73	16	0.17	<.70
Loving	5.83	2	7.00	4	5.93	2	3.25	<.10
Obedient	14.31	18	13.63	18	14.29	18	0.05	<.90
Polite	11.45	15	11.08	15	11.43	15	0.06	<.90
Responsible	7.40	4	6.50	3	7.36	4	0.52	<.50
Self-Controlled	8.65	7	7.92	6	8.60	7	0.42	<.70

TABLE V

MEDIAN TEST COMPARISON OF TWO STAFF AGE GROUPS IN ORDERING OF TERMINAL VALUES

Terminal Value	39 or younger N=85 Median	Rank	40 or older N=95 Median	Rank	Total N=180 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Comfortable Life	10.70	12	12.67	14	11.69	13	1.74	<.20
Equality	10.00	11	8.64	10	9.53	11	2.72	<.10
An Exciting Life	7.70	9	10.83	12	9.13	10	6.48	<.025
Family Security	8.10	10	6.28	4	7.19	6	1.38	<.30
Freedom	7.50	8	5.42	3	6.50	3	5.70	<.025
Happiness	7.10	5	7.50	7	7.36	7	0.02	<.80
Inner Harmony	6.30	4	7.08	6	6.86	4	0.98	<.70
Mature Love	5.67	3	8.50	8.5	7.73	8	8.73	<.005
National Security	15.93	17	14.41	17	15.20	17	6.98	<.01
Pleasure	13.21	15	14.13	16	13.77	16	0.74	<.40
Salvation	17.36	18	16.90	18	17.07	18	0.95	<.40
Self-Respect	5.14	1	4.92	1	5.04	1	0.04	<.90
Sense of Accomplishment	5.17	2	5.32	2	5.27	2	0.00	<.975
Social Recognition	12.50	14	13.30	15	12.95	15	0.95	<.40
True Friendship	7.36	6	8.50	8.5	7.93	9	0.98	<.40
Wisdom	7.39	7	6.50	5	6.97	5	1.26	<.30
World at Peace	13.23	16	12.17	13	12.78	14	1.97	<.20
World of Beauty	11.50	13	10.07	11	10.55	12	2.72	<.10

TABLE VI

MEDIAN TEST COMPARISON OF TWO STAFF AGE GROUPS IN ORDERING OF INSTRUMENTAL VALUES

Instrumental Value	39 or younger N=89 Median	Rank	40 or older N=94 Median	Rank	Total N=183 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Ambitious	9.64	11	10.15	13	9.97	13	0.40	<.60
Broadminded	7.64	6	6.50	4	7.03	4	2.32	<.20
Capable	7.50	5	6.35	3	7.00	3	1.17	<.30
Cheerful	11.30	15	10.25	14	10.80	15	0.46	<.50
Clean	14.00	16	14.62	17	14.42	17	0.27	<.70
Courageous	9.90	13.5	7.19	5	8.17	6	7.40	<.01
Forgiving	9.10	9	10.86	15	10.03	14	2.99	<.10
Helpful	9.14	10	7.50	6	8.55	8	3.44	<.10
Honest	4.36	1	4.58	1	4.50	1	0.00	<.95
Imaginative	9.90	13.5	9.50	10.5	9.70	12	0.05	<.90
Independent	7.10	4	8.81	9	8.25	7	1.25	<.30
Intellectual	8.75	7	9.55	12	9.17	10	0.69	<.50
Logical	8.88	8	9.50	10.5	9.22	11	0.28	<.60
Loving	6.17	3	8.57	8	7.33	5	4.62	<.05
Obedient	17.27	18	16.68	18	16.89	18	0.54	<.50
Polite	14.21	17	14.37	16	14.34	16	0.00	<.95
Responsible	6.06	2	5.20	2	5.82	2	2.08	<.20
Self-Controlled	9.70	12	8.29	7	9.10	9	0.26	<.70

TABLE VII
MEDIAN TEST COMPARISON OF MALE AND FEMALE STUDENTS IN ORDERING OF TERMINAL VALUES

Terminal Value	Female N=696 Median	Rank	Male N=849 Median	Rank	Total N=1545 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Comfortable Life	8.62	10	5.33	2	6.94	4	60.63	<.001
Equality	8.02	8	8.97	11	8.53	10	6.06	<.025
An Exciting Life	11.46	13	8.46	9	10.04	13	33.12	<.001
Family Security	6.91	4	7.05	5	6.98	5	0.02	<.90
Freedom	6.94	5	5.34	3	6.04	2	17.17	<.001
Happiness	4.85	1	5.02	1	4.93	1	0.00	—
Inner Harmony	8.67	11	10.50	14	9.81	11	20.92	<.001
Mature Love	6.15	2	6.33	4	6.26	3	0.13	<.80
National Security	13.54	17	13.79	16	13.71	17	0.76	<.40
Pleasure	12.31	14	10.15	13	11.20	14	37.89	<.001
Salvation	13.12	15	14.02	18	13.67	15	3.03	<.10
Self-Respect	6.28	3	8.02	6	7.39	6	24.42	<.001
A Sense of Accomplishment	9.87	12	9.95	12	9.92	12	0.07	<.80
Social Recognition	14.63	18	13.75	15	14.15	18	9.38	<.005
True Friendship	8.55	9	8.42	8	8.49	9	0.14	<.80
Wisdom	7.98	7	8.70	10	8.40	8	3.68	<.10
A World at Peace	7.50	6	8.32	7	7.95	7	2.09	<.20
A World of Beauty	13.50	16	13.89	17	13.69	16	0.79	<.40

TABLE VIII

MEDIAN TEST COMPARISON OF MALE AND FEMALE STUDENTS IN ORDERING OF INSTRUMENTAL VALUES

	Female N=586		Male N=718		Total N=1304		Median Test Degrees of Freedom: 1	
Instrumental Value	Median	Rank	Median	Rank	Median	Rank	x^2	p-value
Ambitious	7.68	4	4.87	1	6.19	3	32.44	<.001
Broadminded	7.77	6	8.04	6	7.94	6	0.36	<.70
Capable	9.34	12	9.11	8	9.23	11	0.09	<.70
Cheerful	7.73	5	9.71	10	8.79	8	12.73	<.001
Clean	8.04	8	10.02	11	9.20	10	16.73	<.001
Courageous	12.09	15	10.74	15	11.35	14	8.31	<.005
Forgiving	8.07	9	10.35	13	9.27	12	18.63	<.001
Helpful	7.94	7	9.65	9	8.96	9	19.83	<.001
Honest	4.14	1	5.28	2	4.67	1	8.54	<.005
Imaginative	13.12	17	12.11	17	12.57	17	6.76	<.01
Independent	8.62	10	7.24	4	7.84	5	6.84	<.01
Intellectual	11.06	13	10.06	12	10.48	13	2.41	<.20
Logical	12.95	16	10.51	14	11.73	16	30.41	<.001
Loving	5.34	2	6.32	3	5.93	2	6.59	<.020
Obedient	14.23	18	14.32	18	14.29	18	0.00	—
Polite	11.45	14	11.38	16	11.43	15	0.00	<.975
Responsible	7.42	3	7.28	5	7.36	4	0.03	<.90
Self-Controlled	9.20	11	8.29	7	8.60	7	2.39	<.20

TABLE IX
MEDIAN TEST COMPARISON OF MALE AND FEMALE STAFF IN ORDERING OF TERMINAL VALUES

Terminal Value	Female N=62 Median	Rank	Male N=118 Median	Rank	Total N=180 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Comfortable Life	13.54	15	10.13	12	11.69	13	7.06	<.01
Equality	8.63	10	9.75	11	9.53	11	0.79	<.40
An Exciting Life	10.00	11	8.50	10	9.13	10	0.33	<.60
Family Security	8.50	8.5	5.75	3	7.19	6	6.60	<.025
Freedom	5.80	3	6.78	5	6.50	3	0.61	<.50
Happiness	8.50	8.5	6.63	4	7.36	7	0.33	<.60
Inner Harmony	6.50	5	6.96	6	6.86	4	0.36	<.60
Mature Love	7.00	6	7.91	8	7.73	8	0.34	<.60
National Security	15.04	16	15.35	17	15.20	17	0.58	<.50
Pleasure	15.55	17	13.18	16	13.77	16	2.58	<.20
Salvation	17.00	18	17.07	18	17.07	18	0.01	<.90
Self-Respect	4.29	1	5.64	2	5.04	1	6.46	<.01
Sense of Accomplishment	5.60	2	5.11	1	5.27	2	0.34	<.60
Social Recognition	12.86	14	12.96	14	12.95	15	0.01	<.90
True Friendship	7.86	7	7.94	9	7.93	9	0.00	<.99
Wisdom	5.81	4	7.40	7	6.97	5	5.74	<.025
World at Peace	12.50	13	13.04	15	12.78	14	0.36	<.90
World of Beauty	10.22	12	10.75	13	10.55	12	0.33	<.90

TABLE X
MEDIAN TEST COMPARISON OF MALE AND FEMALE STAFF IN ORDERING OF INSTRUMENTAL VALUES

Instrumental Value	Female N=64 Median	Rank	Male N=119 Median	Rank	Total N=183 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Ambitious	10.63	13	9.50	12	9.97	13	1.98	<.20
Broadminded	6.50	4	7.50	4	7.03	4	2.96	<.10
Capable	7.58	7	6.38	3	7.00	3	0.94	<.40
Cheerful	11.50	14.5	10.63	15	10.80	15	0.00	<.95
Clean	14.78	17	13.93	16	14.42	17	0.68	<.50
Courageous	7.50	6	8.41	6	8.17	6	0.35	<.60
Forgiving	9.86	12	10.13	14	10.03	14	0.14	<.80
Helpful	8.20	8	8.64	7	8.55	8	0.10	<.80
Honest	3.78	1	5.25	1	4.50	1	3.09	<.10
Imaginative	9.00	9	9.88	13	9.70	12	0.18	<.70
Independent	6.63	5	9.10	8	8.25	7	2.05	<.20
Intellectual	9.13	10	9.14	9	9.17	10	0.00	—
Logical	9.14	11	9.23	11	9.22	11	0.00	—
Loving	4.89	2	9.17	10	7.33	5	11.58	<.001
Obedient	17.33	18	16.59	18	16.89	18	4.95	<.05
Polite	14.36	16	14.25	17	14.34	16	0.01	<.80
Responsible	6.22	3	5.56	2	5.82	2	1.20	<.30
Self-Controlled	11.50	14.5	7.70	5	9.10	9	2.42	<.20

TABLE XI

MEDIAN TEST COMPARISON OF COMBINED MALE STUDENTS AND STAFF AND COMBINED FEMALE STUDENTS AND STAFF IN ORDERING OF TERMINAL VALUES

Terminal Value	Male N=967 Median	Rank	Female N=758 Median	Rank	Total N=1725 Median	Rank	Median Test Degrees of Freedom: 1 χ^2	p-value
Comfortable Life	5.91	3	9.09	11	7.41	6	108.88	<.001
Equality	9.11	11	8.06	7	8.64	10	16.32	<.001
An Exciting Life	8.47	8	11.29	13	9.98	13	79.80	<.001
Family Security	6.92	5	7.05	5	7.00	4	1.74	<.20
Freedom	5.49	2	6.82	4	6.08	2	26.10	<.001
Happiness	5.20	1	5.04	1	5.12	1	2.35	<.20
Inner Harmony	10.07	13	8.47	9	9.46	11	31.97	<.001
Mature Love	6.53	4	6.22	3	6.40	3	1.42	<.30
National Security	13.99	17	13.83	17	13.94	16	1.64	<.30
Pleasure	10.52	14	12.54	14	11.51	14	74.94	<.001
Salvation	14.50	18	13.59	16	14.13	18	6.43	<.025
Self-Respect	7.82	6	6.02	2	7.10	5	54.55	<.001
A Sense of Accomplishment	9.50	12	9.55	12	9.52	12	0.02	<.90
Social Recognition	13.65	16	14.51	18	14.02	17	19.08	<.001
True Friendship	8.38	7	8.50	10	8.43	8	0.22	<.70
Wisdom	8.58	9	7.77	6	8.24	7	10.77	<.005
A World at Peace	9.02	10	8.07	8	8.63	9	6.97	<.01
A World of Beauty	13.50	15	13.22	15	13.36	15	1.32	<.30

TABLE XII

MEDIAN TEST COMPARISON OF COMBINED MALE STUDENTS AND STAFF AND COMBINED FEMALE STUDENTS AND STAFF IN ORDERING OF INSTRUMENTAL VALUES

Instrumental Value	Male N=837		Female N=650		Total N=1487		Median Test Degrees of Freedom: 1	
	Median	Rank	Median	Rank	Median	Rank	χ^2	p-value
Ambitious	5.33	2	8.14	6	6.69	3	66.11	<.001
Broadminded	7.97	6	7.47	4	7.77	5	2.45	<.20
Capable	8.74	8	9.18	11	8.97	9	3.95	<.05
Cheerful	9.85	10	8.22	7	9.13	10	22.65	<.001
Clean	10.73	15	8.83	10	9.90	12	35.96	<.001
Courageous	10.50	14	11.72	14	11.03	14	16.91	<.001
Forgiving	10.32	13	8.23	8	9.41	11	34.82	<.001
Helpful	9.46	9	7.98	5	8.88	8	37.46	<.001
Honest	5.29	1	4.10	1	4.66	1	23.14	<.001
Imaginative	11.82	16	12.88	17	12.25	17	18.83	<.001
Independent	7.56	5	8.50	9	7.90	6	6.27	<.025
Intellectual	9.87	11	10.66	13	10.23	13	4.38	<.05
Logical	10.29	12	12.71	16	11.34	15	64.28	<.001
Loving	6.75	3	5.27	2	6.08	2	20.37	<.001
Obedient	14.71	18	14.79	18	14.75	18	0.15	<.70
Polite	11.83	17	11.99	15	11.90	16	0.15	<.70
Responsible	6.90	4	7.30	3	7.12	4	1.28	<.30
Self-Controlled	8.25	7	9.41	12	8.64	7	8.50	<.005

TABLE XIII

MEDIAN TEST COMPARISON OF DESIGNATED STUDENT ACADEMIC MAJOR GROUPS IN ORDERING OF TERMINAL VALUE

Terminal Value	Business Admin. N=233 Median	Rank	Engineering-Tech. N=242 Median	Rank	Humanities-Arts N=129 Median	Rank	Languages N=36 Median	Rank	Math-Natural Science N=213 Median	Rank	Social Science N=197 Median	Rank	Education N=146 Median	Rank	Other N=149 Median	Rank	Don't Know N=163 Median	Rank	Total N=1508 Median	Rank	Median Test Degrees of Freedom: 8 x^2	p-value
Comfortable Life	4.29	1	5.20	2	7.90	7	10.50	13	7.92	7	7.58	8	8.85	10	7.38	6	7.30	6	6.97	4	37.50	<.001
Equality	9.03	9	8.03	8	8.83	10	8.67	9	8.04	8	7.18	5	8.31	9	9.00	9	8.90	10	8.50	10	7.33	<.60
Exciting Life	9.79	11	8.55	11	9.30	12	10.08	12	9.88	13	10.95	13	11.37	13	10.50	12	9.92	12	10.05	13	16.94	<.05
Family Security	5.19	3	6.82	5	7.50	6	8.75	10	7.57	5	7.50	7	5.50	2	6.06	3.5	8.61	9	6.97	5	39.11	<.001
Freedom	6.50	5	5.54	3	5.90	3	6.50	4	5.68	2	6.17	2	6.00	4	6.06	3.5	5.83	2	6.03	2	2.13	<.99
Happiness	4.57	2	5.00	1	4.83	1	6.88	5	4.50	1	5.56	1	4.92	1	4.86	1	5.08	1	4.95	1	7.56	<.50
Inner Harmony	10.91	14	10.18	13	9.10	11	7.00	6	9.41	12	9.00	11	8.96	11	11.40	13	9.90	11	9.78	11	24.10	<.005
Mature Love	6.11	4	5.72	4	5.31	2	5.50	1	6.68	3	6.83	3	5.85	3	5.77	2	7.09	4	6.26	3	11.06	<.20
National Security	13.42	15	13.33	15	15.00	18	14.63	17	13.56	16	13.83	15	13.21	16	13.35	16	14.40	17	13.71	17	8.41	<.40
Pleasure	10.70	13	10.09	12	12.00	15	12.00	15	11.89	14	11.23	14	11.58	14	11.50	14	10.72	14	11.24	14	17.22	<.05
Salvation	13.59	16	14.50	18	14.25	16	10.00	11	12.35	15	14.08	17	12.81	15	14.38	17	13.80	16	13.68	15	9.66	<.30
Self-Respect	7.03	6	8.02	7	7.20	4	6.00	3	7.32	4	7.32	6	7.00	5	7.25	5	7.28	5	7.34	6	6.70	<.60
Sense of Accomplishment	10.03	12	10.22	14	9.88	13	10.88	14	9.00	11	9.80	12	9.89	12	9.83	11	10.50	13	9.92	12	4.88	<.80
Social Recognition	13.60	17	13.60	17	14.71	17	15.60	18	14.24	18	14.00	16	14.18	18	14.56	18	14.75	18	14.14	18	11.44	<.20
True Friendship	8.56	8	8.20	9	8.71	9	7.63	7	8.83	10	8.70	10	7.56	7	7.72	7	8.56	8	8.47	9	6.20	<.70
Wisdom	9.46	10	8.24	10	7.42	5	8.63	8	8.21	9	7.17	4	8.15	8	8.58	8	8.50	7	8.41	8	17.07	<.05
World at Peace	8.37	7	7.75	6	8.10	8	5.50	1	7.72	6	8.36	9	7.50	6	9.30	10	7.04	3	7.89	7	10.26	<.30
World of Beauty	14.37	18	13.42	16	11.57	14	12.50	16	14.07	17	14.82	18	14.12	17	12.90	15	13.33	15	13.68	16	27.99	<.001

TABLE XIV

MEDIAN TEST COMPARISON OF DESIGNATED STUDENT ACADEMIC MAJOR GROUPS IN ORDERING OF INSTRUMENTAL VALUES

	Business Admin. N=199		Engineering-Tech. N=212		Humanities-Arts N=106		Languages N=29		Math-Natural Science N=173		Social Science N=165		Education N=125		Other N=125		Don't Know N=138		Total N=1272		Median Test Degrees of Freedom: 8	
Instrumental Value	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	x^2	p-value
Ambitious	6.13	3	4.59	2	6.88	4	8.00	8	6.07	2	6.90	4	5.85	2	6.90	3	6.00	2	6.15	3	11.61	<.20
Broadminded	8.17	6	8.11	6	6.14	3	7.50	5	6.83	3.5	6.77	3	8.21	9	9.79	11	8.29	6	7.80	5	13.15	<.20
Capable	8.32	7.5	8.87	8	9.25	11	8.50	10	9.12	9	9.14	10	8.59	10	10.80	12	9.57	12	9.20	11	11.28	<.20
Cheerful	9.06	11	9.00	9	8.14	6	7.50	5	9.28	10	9.50	11	7.72	5	7.70	6	8.67	7	8.69	8	7.51	<.50
Clean	7.00	5	9.41	10	10.00	12	9.50	12	10.17	13	10.50	12	7.83	6	7.50	5	9.29	10	9.18	10	22.91	<.005
Courageous	11.27	15	10.85	14	12.29	17	12.50	16	11.20	14	11.06	14	11.50	15	11.50	14	10.86	14	11.34	14	3.11	<.95
Forgiving	8.50	9	10.76	13	8.50	8	7.83	7	9.65	11	8.94	9	7.90	7	9.40	10	9.69	13	9.33	12	11.21	<.20
Helpful	8.91	10	9.53	11	8.92	10	7.50	5	9.67	12	8.14	7	8.68	11	7.83	7	9.25	9	8.91	9	7.76	<.50
Honest	4.77	1	4.44	1	4.75	2	3.50	1	4.21	1	5.00	1	4.33	1	4.75	1	5.54	1	4.69	1	8.03	<.50
Imaginative	13.56	18	11.82	17	10.08	13	10.75	14	12.96	17	12.86	17	13.21	17	13.30	17	12.53	17	12.52	17	26.00	<.005
Independent	8.32	7.5	7.59	5	8.71	9	6.00	3	7.64	5	7.50	5	8.00	8	7.93	8	7.58	4	7.85	6	1.86	<.975
Intellectual	9.70	13	10.92	16	11.00	15	9.00	11	7.94	6	11.57	15	10.83	13	12.06	15	9.50	11	10.51	13	15.46	<.10
Logical	12.50	16	10.86	15	11.80	16	11.67	15	11.56	15	10.97	13	12.58	16	12.88	16	11.50	15	11.70	16	6.74	<.60
Loving	5.50	2	6.12	3	4.33	1	5.50	2	6.83	3.5	6.23	2	6.17	3	6.00	2	6.19	3	6.01	2	7.58	<.50
Obedient	12.83	17	13.91	18	14.13	18	13.90	18	14.75	18	15.22	18	13.75	18	14.14	18	15.23	18	14.32	18	20.80	<.01
Polite	9.93	14	10.50	12	10.75	14	13.83	17	12.14	16	12.65	16	11.36	14	11.00	13	11.79	16	11.44	15	19.74	<.025
Responsible	6.68	4	6.50	4	7.00	5	9.50	13	8.42	8	7.57	6	7.07	4	8.38	9	7.88	5	7.39	4	15.90	<.05
Self-Controlled	9.31	12	8.34	7	8.22	7	8.17	9	8.19	7	8.72	8	8.90	12	7.28	4	9.00	8	8.58	7	6.80	<.60

TABLE XV

MEDIAN TEST COMPARISON OF DESIGNATED STAFF ACADEMIC GROUPS IN ORDERING OF TERMINAL VALUES

	Business Admin. N=16		Engineering-Tech. N=11		Humanities-Arts N=23		Languages N=5		Math-Natural Science N=25		Social Science N=29		Other N=46		Total N=155		Median Test Degrees of Freedom: 6	
Terminal Value	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	χ^2	p-value
Comfortable Life	7.00	6.5	7.50	7.5	10.00	12	8.50	9.5	12.50	14	14.00	15	11.58	12	11.70	13	6.20	<.40
Equality	11.50	12.5	9.50	11	10.00	12	9.50	12	10.00	10	8.50	8	7.88	8.5	9.35	11	6.54	<.40
Exciting Life	7.00	6.5	12.50	15	7.00	6	7.50	7.5	9.50	9	10.00	11.5	9.75	11	8.75	10	4.35	<.70
Family Security	7.50	8	8.50	9.5	4.00	1	4.00	2	10.50	12.5	10.00	11.5	6.75	4.5	7.58	7	14.77	<.025
Freedom	6.67	4	7.50	7.5	8.00	8	4.50	3	6.75	5	7.50	6	4.75	1	6.57	3	7.88	<.30
Happiness	5.50	2	5.50	3	8.50	9	9.00	11	7.00	6.5	9.50	10	6.75	4.5	7.32	6	12.68	<.05
Inner Harmony	6.75	5	4.50	1	6.50	4.5	6.50	5.5	6.17	4	7.83	7	7.13	6	7.00	5	3.50	<.80
Mature Love	9.00	10	10.50	12	7.75	7	6.50	5.5	7.83	8	5.10	3	9.14	10	8.10	9	11.57	<.10
National Security	13.75	15	11.50	13.5	15.50	17	15.50	16.5	15.25	17	16.25	17	14.29	17	15.09	17	7.01	<.40
Pleasure	13.75	15	11.50	13.5	14.00	16	12.50	13	13.50	15.5	14.50	16	12.75	14	13.44	16	6.22	<.40
Salvation	15.00	18	15.50	17.5	17.50	18	17.75	18	17.50	18	17.67	18	17.08	18	17.25	18	14.72	<.025
Self-Respect	3.13	1	5.50	3	5.83	3	2.50	1	4.25	1	4.75	2	5.00	2	4.93	1	11.95	<.10
Sense of Accomplishment	6.50	3	5.50	3	5.17	2	3.50	9.5	4.50	2	4.00	1	6.13	3	5.50	2	4.82	<.60
Social Recognition	14.75	17	14.50	16	12.17	15	15.50	16.5	13.50	15.5	11.00	13	12.94	15	12.94	15	5.05	<.60
True Friendship	8.75	9	6.50	5	11.50	14	7.50	7.5	7.00	6.5	5.70	5	7.88	8.5	7.71	8	13.73	<.05
Wisdom	9.50	11	7.17	6	6.50	4.5	5.50	4	4.90	3	5.50	4	7.75	7	6.81	4	9.98	<.20
World at Peace	13.75	15	15.50	17.5	9.50	10	14.50	15	10.17	11	12.50	14	13.25	16	12.62	14	10.17	<.20
World of Beauty	11.50	12.5	8.50	9.5	10.00	12	13.50	14	10.50	12.5	9.17	9	11.75	13	10.36	12	2.24	<.90

TABLE XVI

MEDIAN TEST COMPARISON OF DESIGNATED STAFF ACADEMIC GROUPS IN ORDERING OF INSTRUMENTAL VALUES

	Business Admin. N=15		Engineering-Tech. N=13		Humanities-Arts N=24		Languages N=7		Math-Natural Science N=25		Social Science N=30		Other N=46		Total N=160		Median Test Degrees of Freedom: 6	
Instrumental Value	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	Median	Rank	χ^2	p-value
Ambitious	8.25	7	7.50	6.5	8.75	10	9.50	13	10.00	13	13.00	15	10.50	12.5	10.08	14	8.26	<.30
Broadminded	6.50	3.5	11.50	13.5	8.00	8	10.50	15	7.70	8	6.63	5	5.50	2	6.91	3	14.84	<.025
Capable	7.00	5	9.50	10	6.50	4	8.83	11	6.50	6	7.00	6	6.50	4	7.11	4	13.21	<.05
Cheerful	9.50	10.5	8.50	8.5	13.50	15	9.50	13	12.00	15	9.00	10	10.75	14	10.69	15	10.16	<.20
Clean	12.75	15	11.00	11	14.00	16	13.00	16	15.30	17	14.80	16.5	13.50	16	14.15	16	8.59	<.20
Courageous	7.50	6	11.50	13.5	5.75	2	6.50	7	9.17	12	8.63	9	7.75	6	8.18	7	5.09	<.60
Forgiving	9.50	10.5	6.50	5	8.00	7	6.50	7	11.50	14	10.88	13	10.50	12.5	9.96	13	12.54	<.10
Helpful	11.50	13.5	7.50	6.5	8.88	11	7.50	9.5	9.10	11	5.67	2	8.13	7	8.63	8	8.11	<.30
Honest	4.00	1	4.83	3	3.50	1	1.50	1	4.50	1	5.75	4	3.60	1	4.15	1	6.07	<.50
Imaginative	11.00	12	11.50	13.5	6.50	4	4.50	3	7.17	7	8.50	8	11.75	15	9.75	11.5	11.31	<.10
Independent	11.50	13.5	5.50	4	9.50	12.5	5.00	4	8.00	9	7.50	7	8.50	8	8.09	6	3.59	<.80
Intellectual	9.00	8.5	8.50	8.5	7.50	6	7.50	9.5	6.00	5	9.50	12	9.57	11	8.85	9	2.83	<.90
Logical	9.00	8.5	11.50	13.5	9.50	12.5	9.50	13	5.50	3.5	9.20	11	9.50	10	9.29	10	5.28	<.60
Loving	6.50	3.5	12.50	16	8.50	9	4.00	2	8.50	10	3.50	1	7.13	5	7.36	5	7.01	<.40
Obedient	16.17	18	16.17	18	16.71	18	16.00	18	16.67	18	17.50	18	16.75	18	16.87	18	8.24	<.30
Polite	14.50	17	14.50	17	14.50	17	13.50	17	14.00	16	14.80	16.5	14.25	17	14.52	17	0.92	<.99
Responsible	5.50	2	3.50	1	6.50	4	6.00	5	5.00	2	5.71	3	5.75	3	5.77	2	3.32	<.80
Self-Controlled	13.83	16	4.50	2	10.50	14	6.50	7	5.50	3.5	11.50	14	8.75	9	9.75	11.5	11.69	<.10

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